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PHYSIOLOGY.

LECTURES

ON THE

PHYSICAL CONDITIONS

OF THE

TISSUES OF THE HUMAN BODY

AS APPLIED TO THE EXPLANATION OF

VITAL PHENOMENA.

Delivered at the College of France in 1834,

BY F. MAGENDIE,

Professor of Physiology and Medicine in the College.

LECTURE III.

On the Physical Conditions favourable and unfavourable for Imbibition by the Lungs, the Alimentary Canal, and the Skin.—The Endermic Treatment of Diseases.

IN my last lecture, Gentlemen, I explained to you how all those surfaces which are so circumstanced as to be acted on by external influences, are possessed of the property of imbibition, and showed you, by an exposition of certain general facts, that they imbibe the various materials presented to them, as a sponge does any liquid in which it may be placed, becoming, as it were, the gates through which external substances are admitted and received into the interior of the body. The physical conditions accompanying imbibition in the lungs were laid before you, and you also saw how the difference of physical conditions in the intestinal canal explained, without recurring to any other source, the difference which we observe in the action of substances upon those two great surfaces.

In the lungs we have a great mass of vessels ramifying minutely on a very extended surface; the membrane which composes the last ramifications of the bronchial tubes is so fine and delicate, that substances introduced into the interior of the respiratory system, may almost be said to be in contact with the vessels themselves; the circulation of blood from the lungs to the heart is rapid; the road which the fluid traverses, from the ramifications of the pulmonary artery to the centre of the circulation, is, as you all know, extremely short; the lungs are also situated near the centre of the nervous system, and are intimately united to it by the eighth pair of nerves. From these different circumstances it follows, that substances placed in contact with the pulmonary surface are quickly transported into the general mass of the circulation, and the various phenomena thence resulting, are produced with inconceivable rapidity. For example, if the solution of a poisonous or other deleterious substance be injected through the tracheal artery into the interior of the lungs, no sooner is the fluid introduced than imbibition takes place, and the action of the substance is instantaneous. I make use of the latter strong expression, because the lapse of time is, in fact, barely appreciable. There may be, perhaps, some difference in the quickness with which different poisonous substances act through the medium of the lungs, and, perhaps, if we used proper instruments we might with attention discover those different relations, but this is a matter altogether of minor importance; the main fact, that which I would wish to impress upon your minds, is the imbibition of substances by the pulmonary surface, and their rapid action on the nervous system. Thus you see that this part of the body presents physical conditions most favourable to the local imbibition of substances, and their transport into the general circulation, which constitutes absorption.

Let us now examine the physical conditions presented by the intestinal canal, so far as regards the subject upon which we are occupied. If we compare the surface of the intestinal tube with that formed by the assemblage of the bronchial cells, we find that the former affords a much less extended surface for imbibition. In addition to this, the greater part of the intestinal canal is less vascular, furnished

with a smaller number of capillary vessels, than the lungs. The œsophagus, for example, is clothed with a membrane very analogous to the epidermis of the skin; its surface is pale, little vascular, and by no means calculated to take up the substances presented to it; the rest of the intestinal canal is also less vascular than the pulmonary surface, and its vascular branches are further removed from the centre of the circulating system. Hence an appreciable interval elapses between the introduction of any substance into the digestive canal, and its action upon the system in general, and but a little of the substance is absorbed at the same time. You have familiar illustrations of this fact every day before you; place any active poisonous substance, or an emetic, for instance, in the stomach; some considerable time, a quarter of an hour, half an hour will elapse before the agent is introduced into the economy and its effects are made manifest. This difference of action is easily explained by the physical conditions of this part, its little vascularity when compared with the lungs, and greater distance from the heart. Besides, the stomach in a state of health is habitually lined by a mucous matter, which is closely adherent to its surface, and any substance introduced into the organ must penetrate that viscid layer before it can come in contact with the naked mucous membrane beneath. In cases where the matter is very abundantly laid down, and forms a thick lining over the surface of the stomach, you can readily conceive how imbibition is mechanically opposed, or the mere introduction of the substance may be sufficient to excite a fresh secretion of this matter, and thus create a new physical disposition which opposes its contact with the imbibing surface, and of consequence retards more or less the action of the remedy upon the system at large.

In the great intestines, on the contrary, we find much less of this mucus, and its secretion does not take place with the same rapidity as in the stomach; the phenomenon of absorption is therefore produced much more quickly in this part of the digestive tube, and medicinal substances act here with greater certainty and rapidity. This fact has been long known to physicians, who take advantage of it to introduce various remedies by means of the great intestine, and do so with more certain results than if they had been applied to the stomach. Thus an opiate lavement calms certain irritations of the nervous system more surely and quickly than if the medicine were administered by the mouth, and purgative remedies are applied more conveniently, and in most cases with greater advantage, when given by the rectum. You see, Gentlemen, that I explain this difference of action, not by a difference of vital power or sensibility in the part, but simply by a difference of physical conditions, which seems to me sufficient to account for the varied manner in which the same substance acts when introduced into the lungs, the stomach, or the intestinal canals.

In most of my lectures I have occasion to apply these physical facts to therapeutics, and I shall always take care to direct your attention to them whenever the opportunity occurs. To-day we propose to consider the external surface of the human body, and to investigate the relations which exist between the physical conditions, or, in other words, the anatomical structure, of this part, and the process of imbibition.

It is an observation with which you are all, doubtless, familiar, that the surface of the body does not absorb quickly; this is a fact taught by daily experience. You may touch poisonous substances with impunity, and place the hand for a considerable time in a solution of the most deleterious ingredient without receiving injury, or even encountering any danger; the same circumstance takes place when an individual goes into a bath, as has been demonstrated most clearly by the experiment of M. Séguin. The water is not absorbed by the surface of the skin, or at least absorption does not commence before the lapse of several hours; if you examine the skin of a person just come out of a bath after having remained there for the ordinary period, you will not observe any traces of imbibition or any change in the condition of the part.

This is not the case with other membranes, which undergo a manifest change as soon as they are placed in contact with water; thus a portion of the mucous membrane becomes more heavy, is swollen, and changes colour, when placed for a short time in this fluid. But not so the skin; and you will observe how wisely nature has ordained this circumstance for the advantage of man, surrounding his body as it were with an impenetrable barrier which resists the action of deleterious agents to which he is constantly exposed; thus the keepers of animals frequently receive the saliva of a mad beast upon the hands, face, and other parts of the body, without the occurrence of any accident; the chemist, during his experiments, constantly handles the most poisonous substances, and the most active ingredients, with impunity. Prussic acid, arsenic, corrosive sublimate, &c., may be touched and retouched without danger,

while the application of a small portion to the tongue, or mucous membrane of the digestive tube, will produce instantaneous death.

On what does this remarkable exemption depend? On the existence of certain physical conditions, which I shall presently explain, and when these cease to be present, imbibition takes place through the medium of the skin in the same manner and with the same effect as when the substance is placed in contact with a mucous membrane. The phenomena resulting from imbibition and absorption are, as I said, prevented from taking place simply through these physical conditions, and it is of high importance that the physician should be well acquainted with them when he directs the administration of medicated baths or other remedies of a similar nature. A case occurred not long ago which illustrates in a forcible manner the proposition I have now laid down. One of our celebrated surgeons was dissecting some old anatomical preparations, and consequently had his hands for a considerable time in the alcoholic liquid, which contained a portion of corrosive sublimate; whether the epidermis had been removed from some part of the skin, or whether it arose from the length of time to which the hands were exposed to the action of the fluid, I know not. But in either case it is evident, that the physical conditions which oppose absorption by the skin were removed, the mercury was introduced into the system, and symptoms of poisoning by that mineral were immediately produced.

The presence of a peculiar layer, called the epidermis, is the physical condition to which I have so often alluded. It is of some importance to examine the nature of this substance, and we shall therefore dwell upon it for a while.

When we examine the skin of the human subject, or of an animal, we find it covered by a thin layer of inorganic matter, solid, and adhering by its internal surface to the chorion; not being endowed with sensibility or any of the properties of life, it enables the skin to sustain the contact of poisonous or other deleterious substances, for a considerable length of time (provided they do not act chemically upon it), without any danger to the individual. This homogeneous inorganic layer is a secretion from the skin, and performs, with respect to imbibition, the same part as the mucus does in the intestinal canal; in fact it is something analogous to this latter secretion. The matter which lines the surface of a blistered part, though at first pellucid, soon becomes opaque, and if left to dry, forms a layer something like an imperfect epidermis. But you should bear in mind that it does not prevent the imbibition of medicinal substances, like the former membrane; for if you were to imagine that the dose of any active remedy applied to a blistered surface would be decreased on account of the existence of this mucous layer, fatal consequences might arise; you might poison your patient before you were aware of it. We are not as yet, Gentlemen, perfectly acquainted with the physical properties of this membrane. I have latterly been making several experiments on the subject, and hope to lay the results before you in my next lecture. There is one property, however, which is well established, viz., that it does not possess the power of imbibing quickly; when the epidermis is in a state of integrity, substances may remain in contact with it for almost any length of time, without being introduced into the economy; this is contrary to the ideas generally received; but I am convinced, by numerous experiments, that absorption does not take place through the skin, unless the substances applied to it are of such a nature as to change its chemical composition, or excite irritation in the adjacent bloodvessels. The epidermis, in short, is not furnished with pores, and in this respect resembles metallic substances, which, as you know, are too dense to admit the transmission of fluids from the exterior to the centre.

In many parts of the body the epidermis is laid down in considerable quantity, as on the palms of the hands, the soles of the feet, &c., and here, consequently, imbibition is still more difficult, on account of the number of strata which are placed one over the other, and form an insurmountable obstacle to the passage of any fluid. Over the rest it is spread like a varnish, or a thin layer of Indian rubber, with which nature has clothed the surface of our bodies, to prevent the too ready admission of external agents. But this property, like all others, whether depending on physical or vital conditions, has its limits. Thus, if we expose the epidermis to the action of warm water for a length of time, by keeping the individual several hours in a bath, an alteration is slowly produced; the epidermis becomes opaque, by the introduction of fluid between its lamellæ, impeding the passage of light; it swells, and is finally engorged with the fluid. You also see the same effect resulting when a cataplasm is placed on the sole of the foot; the epidermis gets white, and thickened, and is thrown into wrinkles, from the distention of its substance by the moisture which has been imbibed. A phenomenon somewhat simi-

lar was observed during the prevalence of the cholera in this city; in many cases the epidermis of the hands and feet was engorged and thrown up: but here the imbibition of serous fluid took place from the internal surface of the membrane towards the external.

This leads me to direct your attention, Gentlemen, to the difference of structure and properties between the external and internal surfaces of the epidermis; it is a subject little known or studied, but I have observed some curious phenomena which establish certain facts that are not without interest or utility. You have all noticed, without, perhaps, drawing the consequence which results from the fact, that the phlyctenæ of a blister remain for a long time unchanged on the dead body. Again, if you take a portion of epidermis from the finger, and fill the cavity without water, this fluid does not evaporate for a length of time. When exposed to the air, it will not lose more than a few grains in twenty-four hours; but if you reverse the finger, so as to place the inner surface externally, the water transudes rapidly, and is evaporated in a few hours. This is a constant fact, and deserves consideration, and we necessarily conclude from it that imbibition readily takes place from the external surface of the epidermis to the internal, while fluids are transmitted with difficulty in the contrary direction; but in the living body this law is not observed, and it would seem that the contact of the epidermis with the chorion gives rise to some unknown condition, by which this transit of fluids is altered.

Although we have laid it down as a general rule that the skin does not absorb, yet if this membrane remain for a long time in contact with a substance, the phenomena of imbibition and absorption take place; hence if we allow a patient to remain only a quarter of an hour or twenty minutes in a bath, the fluid does not penetrate the epidermis; but continue the bath for three quarters of an hour, or longer, and you will find the epidermis become softened, engorged, and placed in a condition favourable to the transmission of substances through its parietes. We take advantage of this principle to administer various active remedies through the medium of baths; sulphur, corrosive sublimate, iodine, &c., suspended or dissolved in the fluid, are, after a more or less considerable lapse of time, introduced into the economy. It is not necessary to explain to you at any length the manner in which this takes place; you all know that the true skin is furnished with an abundance of sanguineous vessels, and as soon as ever the medicinal substance has traversed the epidermis, it is placed in contact with their parietes, by which it is imbibed, and transported into the mass of the circulation, constituting absorption. In this act we have no vital phenomenon, and at present I wish to confine myself simply to the physical facts which are sufficient to merit your exclusive attention.

Having thus, Gentlemen, laid before you the chief physical conditions of the skin affecting imbibition and absorption, we shall consider their application to therapeutics, and the influence they are capable of exercising on several points of practice. The phenomenon of inoculation is one of the most interesting and important. This method of introducing artificially the variolous poison was first adopted in the East as a means of preserving female beauty, which at that time, as now, was an article of merchandise at the oriental courts; it was thrice introduced to the notice of the western physicians by Lady Montague, and was for a long time exclusively employed as an antidote to the ravages committed by small-pox in its natural state.

The physical conditions necessary for the introduction of variolous matter into the system are two—viz. the elevation of a small portion of the epidermis, and placing some of the virus in immediate contact with the subjacent bloodvessels of the true skin; when this is carefully done, the operation is most likely to succeed, and the virus seldom fails to be transported into the system. You comprehend, from what has already been said, why we raise up a portion of the epidermis, and place the variolous matter upon the true skin; the process of vaccination is the same, and we must fulfil the same physical conditions, if we wish to obtain a happy result; a small incision should be made into the epidermis, or a thin layer of it raised up upon the point of the lancet, and the vaccine matter gently laid in contact with the bloodvessels of the chorion. In doing this, Gentlemen, it is important to observe that you should never make your incision to such an extent or depth as to draw blood from the arm. This is a most faulty practice; the blood mixes with the vaccine matter, dries perhaps, and prevents it totally from coming in contact with the dermis; the operation is imperfectly performed, and fails. To this cause we may attribute many cases of alleged inefficacy of the vaccine matter to modify or prevent the occurrence of small-pox in the human subject. The failure of this grand preventive means should, in most instances, be referred to the careless or improper manner in which vaccination

has been performed, rather than to any inherent deficiency in the means itself. However, I would remark to you, *en passant*, that it is in my opinion advisable to vaccinate a second time. For many years I was a believer in the efficacy of vaccination as a complete preventive against the occurrence of small-pox, but later experience has induced me to alter this opinion. I have seen numerous cases, both in private practice and in the hospital, which prove, beyond a shadow of doubt, that this disease may occur in its most severe and fatal form after vaccination. I have treated several patients in whom the traces of former vaccination were too manifest to be mistaken, yet who were attacked by variola in the confluent form; some died, others recovered, and many were marked by the cicatrices of this disgusting disease. These facts sufficiently prove either that vaccination does not preserve all individuals equally from an attack of small-pox, or that the effects of this preventive measure are lost, wear out, if I may so say, after a certain lapse of time; I therefore say, revaccinate your patients; you can do no harm by using the precaution, and it is probable, from a great variety of strong facts, that you may do a great deal of good.

Let us now return from this little digression to the subject of our lecture. A careful study, Gentlemen, of the physical conditions of the skin and epidermis, gives rise to many useful conclusions; a knowledge of these conditions teaches us that when the skin is covered by its epidermis, neither absorption nor imbibition takes place; but when that membrane is removed, these phenomena are produced nearly as rapidly as elsewhere. One of my pupils has made a most happy application of this principle, by introducing what has been called the *endermic* method of treating diseases, which consists, as you know, in removing the epidermis by a blister, &c., and placing the medicine in immediate contact with the sanguineous vessels which cover the external surface of the chorion. By this means various remedies are quickly and conveniently introduced into the economy, without any of those inconveniences which many substances produce when taken into the stomach.

In order to employ the endermic method with advantage, we should carefully watch all the various conditions which the surface upon which the remedy is applied may present; whether it be exposed by the action of a blister, caustic, or other means; for the quantity of the remedy, and the frequency of its application, are in a great measure governed by the condition of the absorbing surface. Thus, if the exposed chorion be covered with a thick layer of mucus, we should increase the dose in a small degree; remembering, at the same time, what I before told you, that this mucous layer does not totally impede absorption, like the epidermis; again, if the blistered surface be much inflamed, we have no absorption taking place; this is a well-known fact, and why is this? It depends on the physical condition of the small vessels during inflammation; the circulation of blood in the capillaries is deranged during this process, the small vessels become engorged with fluid, which, finally, ceases to be transmitted by them to the heart; circulation, in short, is suspended, and with it absorption, because the imbibed matter cannot be transmitted from a part in which circulation has ceased. This phenomenon, therefore, of the arrest of absorption on an inflamed surface is explained according to my view of the subject by mechanical conditions, and not by any vital law, or property of sensibility.

The endermic method may be employed in a variety of ways; the most common manner is to remove the epidermis by the action of a blister, and sprinkle the exposed surface with the powder of the substance, if it be insoluble; or, in the contrary case, to place some lint, moistened with a solution of the remedy we propose to introduce upon the part; if the substance applied be one of those whose effects on the economy are readily traced and distinctly marked, they often manifest themselves in a few minutes; hence the physician must be careful how he proportions the dose of such remedies, and watch their operation with the greatest attention. We have numerous examples on record, where neglect in this matter has been followed by fatal consequences; caustic substances, when applied to old ulcerations, in order to stimulate the vital powers of the part, have often been taken up, and have produced death; and since surgeons have been in the habit of applying arsenic to denuded surfaces, innumerable accidents of a severe nature have been the result. The seton is another form by which medicinal substances may be introduced according to the endermic method, and here also caution is necessary; I remember the case of an old curé, who was poisoned in this manner by the introduction of a morsel of strychnine into a seton.

These facts, Gentlemen, and many others which I might cite to you, were it necessary, prove the truth of the proposition laid down, that whenever the epidermis is raised from the surface of the skin, imbibition and absorption take place as

on other tissues; but the phenomena of absorption may be impeded by a variety of circumstances; thus if the epidermis be rapidly raised from the chorion, as takes place when boiling water is thrown upon the skin, imbibition is rendered impossible, or at least considerably impeded; the water at this high temperature puts a stop to the circulation in the capillary vessels of the part; one of the conditions essentially necessary to the transport of a substance into the system is thus wanting, and we have no absorption. I have made several experiments upon this matter, and find that boiling water changes the structural nature of the part in a considerable degree, and shrivels up the surface of the skin into a layer, like parchment; this being the case, you can readily conceive how the imbibition of substances must be rendered impossible, or difficult, in a tissue thus altered from its natural state.

You may also have observed that medicinal substances may be applied without effect to certain old ulcerations, where the surface is pale and flabby, exhibiting little or no signs of vascularity, or where the contact of the remedy with the subjacent vessels of the true skin is impeded by foreign growths, excrescences, &c. In those cases, also, absorption does not take place, because the physical conditions necessary for the accomplishment of that action do not exist. The endermic method of treating diseases affords many advantages, and is generally followed by rapidly-marked effects, but it requires great care and caution. I cannot impress this too strongly on your attention, particularly if the nature of the disease be such as to require the administration of strong or dangerous remedies, as arsenic, mercury, &c., for many a patient has been unexpectedly poisoned by the too rapid introduction of a substance which was intended to produce effects of quite a different nature. I shall now terminate these observations, by the remark, that the study of the physical conditions of the skin, in relation to absorption and imbibition, is of great importance in the practice of medicine, and conducts to results in themselves highly useful, without, at the same time, preventing us from an observance of the accompanying vital phenomena.

THE HIGH-MORAL FEELING SCHOOL.—"Do you think that the discipline of the University, independently of study, supplies a guarantee of moral habits?—Not entirely."—*Evid. of a Fellow of the School.* This is very like "turning King's evidence!"

CLINICAL OBSERVATIONS

ON

VARIOUS DISEASES,

BY

MR. WARDROP.

ON THE TREATMENT OF CANCER.

GREAT obscurity and doubt still exist in the minds even of the most experienced and judicious surgeons, as to the treatment of cancer, and it behoves every man who has opportunities of observing that disease to disclose the result of his experience on this important subject. If but a few would give publicity to what they have seen and what they know regarding the treatment of this malady, the interests of humanity might be essentially benefited.

Cases of this sad disease are constantly occurring in which I am perplexed and doubtful what treatment to recommend, and on referring such patients to obtain the opinion of others, I find even amongst the most experienced surgeons great discrepancy and indecision, evidently arising from their not having any fixed practical maxims to guide them.

It is too common to urge, when giving an opinion as to the propriety of performing an operation for cancer, that it is a measure which affords the *only* hope of relief. But how often has this opinion been acted upon when there was no hope! when past experience had shown again and again, that no operation undertaken under similar circumstances had ever been successful! The inclination on the part of some surgeons to perform operations is in such cases too often exemplified.

Cancer of the Lip treated by Excision.

Case 1.—An aged shepherd was placed under my care on account of an ulcerated swelling of the lower lip, which had all the usual characters of cancer. The hardness appeared to be circumscribed, and the mass was of inconsiderable bulk, so that, as far as could be ascertained, the whole might be easily removed by the knife. But the symptom which rendered this case more particularly interesting, and caused me to hesitate before deciding on the operation, was an enlargement of a submaxillary lymphatic gland, which he stated had commenced to swell only three weeks previously, and after the application of a stimulating ointment to the sore. Had the gland become contaminated in the usual manner, from the disease having advanced to its secondary stage, I would not have hesitated for a moment in giving

my opinion against attempting the extirpation of this tumour, no practical point being more incontrovertibly established than that the excision of a scirrhous tumour ought never to be attempted when any *secondary* symptom of this disease has made its appearance. The operation would therefore have been highly improper had it not appeared to me, that there was a circumstance in the history of this case which made it doubtful whether or not the affected gland was really scirrhous. The enlargement having commenced immediately after an irritating application to the ulcer, I was induced to think it probable that the affection of the gland might be merely sympathetic, and with this impression I recommended the removal of the lip, as affording the patient at least some chance of relief from his otherwise hopeless condition.

The operation was accordingly performed, the wound healed readily by adhesion, and he returned to the country, advised to apply a few leeches repeatedly on the swelled gland, with the expectation that it would thus be resolved. In this hope, however, I was disappointed, for though the gland underwent slight alteration in its bulk for some months, yet in a little more than a year it had considerably increased. Its central portion became softened, suppuration took place, the matter which was discharged had an unhealthy character, the skin ulcerated, assuming all the characters of a cancerous sore, and the patient ultimately died in *St. George's Hospital*, after a protracted suffering from this fearful malady.

Case 2.—One of the servants of the late King, in the prime of life, had a cancerous tumour in the under lip, which was removed at Windsor, by Mr. O'Reilly. The disease returned in the cicatrix, and Mr. O'Reilly performed a second operation. Some months after he was placed under my care, when I found a scirrhous mass in the site of the cicatrix, and of very considerable extent, so much so, that in order to extirpate the disease, it would be requisite to remove almost the whole lip.

There were, therefore, two points to consider in the treatment of this case,—the first was how far a third operation would be likely to exterminate the disease,—the second, how far it would be worth while for the patient to submit to the loss of so large a portion of the parietes of the mouth, with an uncertainty of success by so severe an operation.

It has, I believe, seldom happened, that when an operation for cancer has been once performed a future operation has ever been successful. This has long appeared to me to arise chiefly from the circumstance, that if a scirrhous mass be touched by the knife, and any portion of the disease is not removed, the remaining portion advances much more rapidly than if no operation had been performed, and, therefore, the possibility in this case was, that the disease had extended further than I could detect beyond the reach of the knife.

In performing a third operation in this patient, it would, therefore, become imperative to remove not only the parts which were manifestly contaminated, but also a considerable portion of what appeared sound.

The propriety of an operation appeared to me evident, first, from there not yet being any secondary symptom—no swelled gland being discernible; secondly, from the patient, who was young and in excellent health, not being able to contemplate any chance of relief but by the removal of the diseased parts, and having indeed otherwise the prospect of continual suffering from a loathsome and fatal malady. This view of the case induced me to recommend, and without hesitation to undertake, the excision of the lip. I was impressed with the absolute necessity of not attempting to economize sound parts where there appeared any chance of contamination, and, therefore, determined on removing such parts as were apparently sound to a considerable extent beyond the diseased structure.

The incision was commenced near the left angle of the mouth, carried down close to the margin of the lower jaw, extended along the chin, and terminated near the right angle of the mouth, thus including almost the whole lip. The wound after being suffered to bleed freely, was covered with lint. The only circumstance worthy of notice in the healing of the wound, was the effort made by nature to drag the skin from all directions around towards the site of the lip, and she thus supplied the loss occasioned by the operation in a most surprising degree. When I saw him several years after this operation had been performed, it was most interesting to observe the extent and wonderful success of nature's efforts in supplying the lost lip;—and this patient has since continued in perfect health.

I have selected the two preceding cases for several reasons. The first case affords a melancholy proof of the impropriety of removing a cancerous tumour when a lymphatic gland has become contaminated, and it is also a proof of the danger of hastening the accession of secondary symptoms by applying irritating

applications to a cancerous ulcer. The same thing is often remarked of a primary venereal sore which when left alone makes but slow progress, but when irritated by local applications, soon causes secondary symptoms, particularly the formation of bubo.

The second case affords a more satisfactory result, showing with what success a primary cancerous tumour may be removed, and impressing on the mind of the young surgeon, that whenever excision is resorted to in scirrhous tumours, the success of the operation essentially depends on removing, along with what is *sensibly* diseased, a very considerable portion of the adjunct healthy structure. The good effects of this principle I could exemplify by many cases.

Cancer of the Penis treated by Amputation.

Case 3.—A patient was sent to the Hospital of surgery in Panton-square, by Dr. Titley, with a cancerous affection of the penis, the glans being completely imbedded in a large bleeding fungus, with ragged everted edges, discharging a fetid sanies.

The disease appeared quite circumscribed, no hardness being discernible beyond the ulceration, and none of the adjacent lymphatic glands were swelled. He stated that two years before a small warty excrescence grew on the anterior part of the glans, which speedily degenerated into a foul ulcer, and continued gradually to extend, eating away a large portion of the penis, until eighteen months afterwards, when the diseased portion was removed. The wound contracted, but never healed, and the ulcer soon after assumed a character similar in every respect to the original disease. As there were no contaminated glands, and the disease appeared to be quite within reach of the knife, I recommended an operation. This was performed in the usual manner, and the member removed as near as possible to the pubes. The wound progressively healed, and the patient continued perfectly well, after the operation, upwards of three years, when he was seized with some affection of the head, which terminated fatally.

This, as well as the preceding case (Case 2), shows in a remarkable manner how long cancerous affections may continue without causing any constitutional contamination, and points out the propriety, when such tumours are extirpated, of not limiting the incision to those parts decidedly diseased, but removing a quantity of the adjacent sound structure.

Case 4.—A groom in the service of the late King, had from childhood a very narrow and contracted orifice of the urethra, for which he was long under the care of Sir Everard Home, who had recommended the use of bougies, to prevent further contraction. When he was far advanced in years a small fungus began to protrude, which had at first the appearance of exuberant granulations, but which by degrees assumed all the characters of a cancerous fungus; and I saw him about three years after the disease had assumed this malignant character. Sir Astley Cooper and Sir B. Brodie having recommended amputation of the diseased member, I was also commanded by his Majesty to see him. I found the natural appearance and structure of the penis completely changed, the integuments being ulcerated and covered with a large cancerous fungus. Though the indurated mass into which the cavernous bodies were converted reached near the pubes, yet there was apparent a sound portion left, and as no glands were enlarged, I was also of opinion that the penis should be amputated.

The operation was accordingly performed by Sir B. Brodie, and but a few months elapsed before the wound was covered by a cancerous ulcer, which progressively spread till it destroyed life.

In contemplating this case, it is evident, in the first place, that the disease did not prove fatal by the accession of any secondary symptom, but continued to be local until its fatal termination. It also points out the danger of delay, for it cannot be denied that there must have been a period when an operation might have been successful. To discriminate this period, however, is not easy in such cases, as neither the patient himself nor the surgeon can perceive the precise time when a part which has long been diseased at last begins to assume the malignant character.

Cancer of the Rectum treated by Excision.

Case 5.—A gentleman, in the sixty-eighth year of his age, applied to me on account of a disease in the rectum, which rendered his existence burdensome. The anus was very much contracted by a firm unyielding scirrhous mass, which completely encircled it; and at some points the internal membrane of the intestine was ulcerated. I thought I could distinctly trace, both by an external and internal examination, the limits of this scirrhous ring. He had for several months been afflicted with great pain in evacuating the bowels, and for some time their solid contents could be discharged only with very great difficulty, and with the severest torture, whilst the more fluid matter was frequently coming away involuntarily.

Various means for relief had been from time to time resorted to; amongst others, he informed me, that the scirrhous ring encircling the anus, had been slit open by Sir B. Brodie in four different directions, and bougies afterwards employed to keep the orifice, which was thus enlarged, dilated.

In this deplorable condition, it appeared to me to be a rational measure to attempt the excision of the diseased mass. After the most careful examination which the extreme tenderness of the parts would admit, I was impressed with the belief that the scirrhus was circumscribed and within the reach of the knife. I did not apprehend any danger from hemorrhage, nor any permanent inconvenience from the unavoidable removal of a portion of the sphincter muscle, conceiving that the additional thickness which the muscular coat of the intestine above the diseased portion might probably have acquired, from the increased action to which it had been exposed, along with the levator and the fibres of the sphincter, which would not be removed by the operation, might, after the healing of the wound, be sufficient to prevent involuntary evacuations. At all events, on taking the least favourable view of the case, and fearing the possibility of the contents of the rectum being discharged involuntarily throughout life, still the removal of the scirrhous ring would admit of the alvine evacuation taking place without the agonizing suffering under which this individual laboured; and thus if the operation were not the means of prolonging his life, it might materially alleviate his sufferings. These considerations led me to recommend to the patient this measure, to which he cheerfully acquiesced.

Using the fore-finger of my left hand as a guide, I slowly and cautiously pulled forwards the diseased mass, made a circular incision around the anus at some distance from it, and dissected out the morbid parts. I could, however, then trace a narrow scirrhous band, stretching up the internal membrane of the intestine, but so high that I could not venture to remove it, for the bleeding being already violent, even from some small arteries, the division of any considerable vessel must have been very hazardous, and the depth of the wound was such, that it was doubtful whether a vessel could have been secured by a ligature.

The wound was left without any dressing, the bleeding soon ceased, and by the assistance of an opiate he became free from pain, and never had any febrile symptom. No inflammation followed, and the surface of the wound was covered with a crust of lymph, which nature seemed to employ to prevent its being irritated by the evacuations. These, in place of coming away at intervals, and creating torture, now passed off involuntarily, and there was feculent matter almost constantly drilling through the wound, to receive which, and prevent unnecessary discomfort, every pains were taken in the arrangement of the bed.

Little change took place in this patient's condition for a considerable time. The feculent discharge continued to pass involuntarily; the wound showed no disposition to granulate, but remained incrusted, and in place of regaining strength, though released from his former excessive torture, the patient gradually became more feeble, until symptoms of serious disease of the lungs came on, which terminated in the formation of abscess, and from which he died, little more than four months after the operation.

Cancer of the Labium and Nympha, treated by Excision.

Case 6.—A respectable female, between forty and fifty years old, consulted me on account of a large cancerous ulcer of the genitals, from which she had for several years suffered excruciating pain, and her life was rendered almost insupportable, her nights being passed without sleep, and enduring great agony in voiding the urine.

The mucous membrane of the right nympha and labium was extensively diseased, and in the centre of the diseased mass there was a large irregular-shaped cancerous ulcer, extending deeply into the structure of the labium, and the adjacent mucous membrane was in a very indurated and highly inflamed state. This ulceration extended upwards, nearly to the clitoris, and posteriorly but a short distance from the commencement of the vagina. It poured forth continually an acrimonious and very fetid discharge.

This unfortunate sufferer had employed a variety of means which were recommended to her, both in this country and on the continent, without experiencing any relief, and she consulted several surgeons, and amongst others the distinguished Sir Charles Clarke, as to the possibility and propriety of removing the diseased parts by an operation; but by all she was dissuaded from the attempt.

Such, however, was the extent of her sufferings, that being persuaded I could reach with the knife beyond all the diseased parts, being also of opinion that if the operation did not succeed, it would only be in consequence of the disease returning in a secondary form, or in some distant organ, whilst it would be the im-

mediate means of relieving her from the existing severe local suffering, I advised an operation, to which she most readily assented.

The operation consisted in making an incision, so as completely to encircle the whole of the diseased mass, and to extend as far from the contaminated parts as practicable. The wound was so deep that the knife could be guided only by the finger, and the operation could not have even been completed, had not the patient been secured as for lithotomy. The extent and depth of the wound had a most appalling appearance, and it bled violently from numerous orifices, to arrest which no means were employed, from a consideration that as he was of a plethoric habit, it was proper to allow it to bleed freely, in order to prevent the inflammatory state which so severe an operation was likely to excite. The pain of the wound quickly subsided, she took a large dose of calomel and opium, and the bleeding progressively diminished, though a very large quantity of blood escaped, and it continued to flow for not less than twenty-four hours.

The result of this operation was most satisfactory. No febrile symptoms supervened, the wound granulated and cicatrized with great rapidity, and in a few weeks she was restored to perfect health; and I have been informed by Mr. HUNT, who also attended her, that she has not had any return of the local disease, but now enjoys perfect health, upwards of five years having elapsed since the operation.

Remarks.—I have selected the preceding six cases of cancer affecting the skin, and at that part where it unites with the mucous membrane, in order to illustrate some interesting points relative to the treatment of this disease.

In three of the cases the operation failed: in one of them (Case 1) in consequence of a lymphatic gland being contaminated when the primary tumour in the lip was removed; in another (Case 4) there is every reason to doubt that the scirrhous mass in the penis was completely extirpated; and in the third case (Case 5) a diseased portion of rectum, which I did not detect previous to the operation, and the shattered state of the patient's constitution, leave a doubt on my mind, whether I would ever again, under such circumstances, venture to recommend so hazardous a measure with no other hope than that of obtaining relief from severe pain and suffering.

The remaining three cases present a more cheering prospect to the young surgeon, and show the decided benefit which may be derived from his art in alleviating some of the most frightful ills which occasionally afflict mankind.

In the first of these cases (Case 2), the patient, after submitting to have a cancerous tumour in his lip twice removed, was permanently relieved by a third operation. In the second case (Case 3) a very large cancerous penis was successfully removed after a serious operation had been previously performed; and in the last case (Case 6) a cancerous tumour of considerable bulk, creating intense agony, and situated in a most dangerous position, was removed with complete success.

There remain several very interesting points in the treatment of cancer, particularly when it affects the female breast, which I shall on a future occasion endeavour to discuss.

LITHOTRIPSY AND LITHOTOMY.

To the Editor of THE LANCET.

SIR,—You will much oblige me by giving space, in an early number of your valuable Journal, to the following cases of stone in which lithotrity and lithotomy were performed. I am, Sir,

Yours very respectfully,

WM. TEATPESON, Surgeon.

Framlingham, Oct. 7, 1834.

In the early part of May in last year, I accompanied a friend and patient, in whose bladder I had detected the presence of a calculus, to town, for the purpose of placing him under the care of Mr. Costello, when that gentleman very kindly showed me his method of operating at three sittings, to which my friend submitted during the week I remained with him, and afforded me at the same period an opportunity of witnessing his operations on another of his patients, and most liberally gave directions for the construction of one of his improved percussors for me, at Millikin's in the Strand, which instrument he used in the last eight sittings, completely relieving my friend from his enemy. On my return I omitted no opportunity of manipulating on the dead body, as well as on a rough machine which I had made, as nearly as I could, to resemble the human bladder.

Case 1.—On the 7th of last May, Mr. Lanchester, surgeon, of Laxfield, kindly placed under my care William Kent, of that parish, labourer, aged 64, who had for more than five years been suffering all the severe symptoms of stone in the bladder, obliging him frequently to rise as often as twenty times in a night, while from the great pain he experienced in

walking, he was obliged to give up his work. During this period his bladder had been sounded by several practitioners, but no calculus was detected, till a few days previous to his coming under my care, when Mr. Lanchester obtained more decided intimation of its presence. On injecting the bladder in Mr. Costello's method, I had no difficulty in finding a calculus, which, on introducing the percussor, I succeeded in a few minutes in grasping, and, having fixed the instrument in the vice, crushed with a few taps of the hammer, with but little inconvenience to my patient. This operation I repeated generally twice in the week, until, on introducing the instrument on the 27th of September, I could detect no remains of calculus. My patient had lost all his distressing symptoms, he was able to remain quiet in his bed from nine o'clock, his usual time of retiring, till four o'clock the next morning; and he assured me that he could walk ten miles with as much ease as he ever did. Last Saturday he walked over here to breakfast, a distance of seven miles, and told me he felt no return of symptoms, and as he was extending his walk several miles, I did not think it necessary to introduce an instrument. He submitted to *thirty-seven sittings* before every portion of the calculus was removed, the detritus of which weighs over three drachms, and I have no doubt that another drachm was wasted. The dexterity of Mr. Costello would, I have every reason to think, have enabled him to remove the calculus much sooner, but of course safety was my first object, and I am happy to say that except a rather considerable hemorrhage after the nineteenth sitting, we have never had anything to observe but a gradual amendment of symptoms, and he has generally walked three miles to meet me, going back again the same day. At the last eighteen sittings by great care he did not lose one drop of blood. Indeed, I am quite sure that this operation can never become generally available but by great tenderness in the introduction of instruments.

Case 2.—May 6th, Mr. Keeble, farmer, of Workingworth, submitted to a sitting for lithotrity, but although I had in this case the assistance of my friend Mr. King, surgeon, of Saxmundham (one of the most experienced and successful lithotomists in the county), from the great size and egg-shape of the calculus, we could not succeed in grasping it with the percussor; and as my patient was anxious to be quickly relieved, I performed the operation for lithotomy on the 9th, in the presence of several professional friends, on which occasion I used a double cutting-gorget, improved by Mr. King of Saxmundham, having a projection from its beak adapted to the groove of the staff, which gives increased security in its introduction, and from the greater extent of incision it produces, I think it possesses advantages over any other I have yet seen. The calculus removed in this case weighed two ounces and a half, and measured an inch and a half in its short, and two inches and a quarter in its long diameter. The poor fellow is, I am happy to state, quite recovered, except so far as regards a slight incontinence of urine.

I have now a patient under lithotrity who gives me great perplexity from irritableness of the urethra and bladder, which is accompanied by enlarged prostate, but as he will not submit to lithotomy, or go to town, I must do my best. Mr. Costello sounded this patient at my house.

CASES OCCURRING IN

OBSTETRIC PRACTICE.

To the Editor of THE LANCET.

SIR,—I herewith transmit for publication, in your periodical, a statement of some interesting cases in midwifery which have occurred in my own practice. At the same time I take this opportunity of mentioning, with reference to the cases of lithotrity which you did me the favour of inserting in one of your last Numbers, that the instruments made use of in the several operations were made by F. Clewly of Sheffield, a circumstance which I omitted to mention, but which, in justice to the workmanship of the maker, I am anxious to state, as I cannot sufficiently express my approval of their manufacture. I remain, Sir, your most obedient servant,

EDGAR ASHE SPILSBURY.

Walsall, Oct. 12th, 1834.

Misdirected Efforts of Expulsion in Difficult Labours.

A practitioner requested my aid in haste. His patient had been many hours in labour. On examination, there was found above the umbilicus a large tumour of the size of the head of a full-grown fœtus, very hard, and firm. I used much diligence to make out this tumour, and was forced to conclude it was a second child *ex utero*. The presentation at the vulva was natural, far advanced, but impacted at the outlet of the pelvis. The vitality of the living membrane of the va-

gina had suffered, and it was black. In protracted labours, by-standers officiously insist on the woman's exertion. That mischievous aphorism, "Bear down to your pains," is echoed even by unthinking and impatient medical men. The muscular force thus constantly exerted against the hard head, kills the soft parts, and exhausts the uterine power as well as the mental.

In the case in question the pains had left, the pulse was very quick and small, the countenance exceedingly anxious, and altogether the woman was in a most perilous state. I gave my opinion that immediate delivery was necessary, by craniotomy, conceiving that if this state were complicated with a second fœtus *ex utero*, her case was doubly desperate, and by the delivery of the one the difficulty of the tumour would be solved. The delivery was performed, and we were happy to find that the fœtus had been dead some hours, for the cuticle easily separated. The delivery itself was speedy, and the tumour, which had now disappeared, proved to be the stuffed head of the colon, caused by constipation of the bowels, which had fallen down to its usual place. The woman sunk from irritative fever on the third day. I can call to mind three other cases where the soft parts were in like manner killed by these misdirected efforts at expulsion; only one of them recovered; the sloughs from the vagina in that case were eight inches long. The retentive power of the bladder was a long time imperfect. She was many weeks in peril, but eventually recovered, after much suffering.

Error of Impatience after Rupture of the Membranes.

A lady, at her full time, was seized with a sudden flooding. When I arrived the hemorrhage had stopped, but no pain succeeded. On examination the os uteri was found fully dilated, and the presentation natural, but no protrusion of the parts could be felt at the uterine outlet. I really thought that the membranes were ruptured, and the waters evacuated. The recumbent position was enjoined. I did not leave her, but waited for the accession of pains. The day passed through without any symptoms of uterine action. Towards evening the pulse grew quick and irritable, and I perceived slight spasmodic twitches of the muscles of the face. Not satisfied with her state, I informed the friends that I should now more decidedly interfere, and inquire into the cause of the want of action. I introduced my hand into the uterus, which gave no resistance. Much to my surprise the membranes were unruptured, and on my breaking them the flow of fluid was excessive. I easily reached the feet, turned, and delivered. Much hemorrhage followed the expulsion of the placenta, and her condition became very critical. Mania and irritative fever followed, and several weeks of constitutional prostration, but eventually the lady recovered.

Here was a case where the uterus was reduced to atony by distention, attended with convulsions, and life itself was in great jeopardy. When the waters were evacuated, the case should have been left to the natural efforts. The power of the uterus would have recovered gradually and the child been saved; hemorrhage would have been prevented, and the life of the mother of a large family not have been hazarded in her well doing.

By our failures rather than our success, we acquire the lessons of hard-earned experience. These lead to most profitable reflections. Years have since passed, but the impressions of this case marked it as a memorable error in judgment, threatening the issue of a case which was judiciously begun, yet nearly rendered fatal by a hasty impatience.

Delivery during Insensibility from Apoplexy.

A young woman, in full health, with good constitution, and large in person, in the eighth month of her first pregnancy, was seized with apoplexy in the middle of the night. At eleven o'clock a.m. I first saw her. She was purple, stertorous, insensible, and in convulsions. I bled her to thirty-three ounces, with no apparent alteration but greater paleness. The state demanded that labour should be immediately brought on; for which purpose I introduced my hand into the vagina, and found the os uteri perfectly closed, but it readily gave way, and admitted my hand into the uterus. The membranes were ruptured, and the waters discharged. The case was then left to the natural efforts. The regular contractions of the uterus could be felt to act, but insensibility prevented any evidence by expression of pain, and as the uterus acted the convulsions never returned. About five in the evening, while perfectly unconscious, she was delivered by the natural efforts, of a dead child, the placenta quickly following. Her bowels were freely purged, and some light nourishment was swallowed. Four days elapsed before she was sensible to outward impressions. After several more days, she understood that her delivery had been safely accomplished. Her convalescence was progressive and permanent.

Granulations of the Uterus.—Flooding.

A married woman, mother of several children, had been profusely flooding. The usual treatment had failed, and her state, from excessive loss of blood, was one of eminent peril. I introduced my hand into the vagina, and found that the uterine cavity would admit my two fingers. A granulated membrane, partially detached, hung to its walls. By a little care and perseverance the whole was separated and expelled. The walls of the uterus also felt granulated. Hemorrhage ceased, and by attending to the nervous symptoms, the consequence of excessive loss of blood, after many weeks she recovered. Much to my surprise the uterine functions were perfect, and her restoration is apparently complete. I never have been able to ascertain whether this state depended on imperfect impregnation, or on diseased action. No ovum or semblance of one had been perceived to escape.

Rupture of the Uterus by the Efforts at Expulsion.

A woman sent in haste, requiring assistance for violent pain in her bowels. When I arrived, I found that she had been in labour, but all the pains had suddenly ceased. On examining the internal integuments, the fœtus had escaped from the uterine cavity, and lay just under the integuments. On examination per vaginam, the rent through which the escape had been effected was found in the neck of the uterus, leading immediately to the cavity containing the bowels. The pulse was quickened, but the countenance did not indicate so much anxiety as the nature of the accident would have led me to expect. The severity and danger of the accident were explained to the friends, and a consultation was agreed upon. The rent had happened by the natural efforts, in the absence of the midwife, about eleven o'clock a.m., and it was not before the following evening that the professional gentlemen could meet. Delivery through the rent was decided upon and effected.

Twelve hours afterwards the patient sunk. On inspection of the body, coagulable lymph was found to have glued all the intestines together, and a layer was completed for the fœtus to rest upon, showing that the process of insulation was far advanced, and in a fair way to be perfected.

I am not sure that the point of practice, *to deliver*, in such cases, gives the woman the best chance. I own, from what I saw at this inspection, that I should hesitate. The placenta, in this case, had not escaped from the uterine cavity. I should divide the funis, promote the expulsion of that organ of fœtal life; and trust the subsequent part of the case to the laws of animal life.

SPONTANEOUS RESTORATION OF THE SIGHT.

To the Editor of THE LANCET.

SIR,—For the last ten years I have had opportunities of seeing a more than ordinary number of diseases incident to the eye, without having observed a parallel case to that which I now communicate.

Richard Harland, æt. 18, of a delicate habit, applied to me for relief on the 25th of last August. The right eye was inflamed, and there was a large speck on the cornea. The eye was also turbid, probably in consequence of some opacity of the membranes investing the crystalline and vitreous humour. He stated that the pain was not acute, and that the opacity had only existed for two days. Judging from other cases, I conceived that he was mistaken in this, and that the deposit had been for some time progressing. Leeches, purgatives, and a saturnine collyrium, were prescribed. On the following day he was blistered behind the ear; and with a view of suspending morbid action, two grains of calomel were administered three times a day, for three or four days, but the result was unavailing. He experienced little or no pain; neither was there much intolerance of light, but a thick white deposit now covered two-thirds of the cornea. Full doses of the sulphate of quinine were given for four or five days, at the expiration of which time not a ray of light could enter the eye, and his case appeared hopeless; consequently, no further treatment was adopted. Ten days after this, I accidentally met my patient, and recognised the case as a confirmed leucoma, which probably might in process of time pass into staphyloma.

Last week the boy called, and wished me to examine his eye, stating that of late he had found his sight improve daily. There was slight chronic inflammation, but the greater portion of the cornea was transparent. A little stimulating lotion was given to him as a placebo. Yesterday I observed the progress of the case; his sight is now in a great measure restored, and will very soon, I trust, be completely re-established.

This sketch differs from many submitted to the medical world. In this case nature was ultimately left to her own resources, and accomplished a cure.

We know by a law of the absorbent system, that parts of the body ceasing to perform the office which nature intended, are removed. This is strongly exemplified in chronic inflammation of the liver; that organ being at first increased but afterwards diminished in bulk.

Another ophthalmic case occurs to my recollection, illustrating the power and capricious nature of the absorbent vessels. About five years ago the capsule arose the day after I had depressed the lens of a patient afflicted with cataract. It unfolded itself, and spread like a curtain over two-thirds of the pupil. In consequence of the observations of Scarpa and other eminent oculists, conjoined with my own experience, I judged another operation indispensable, but was relieved from that duty on observing that the membrane, in little more than a week, had entirely disappeared, for he could, by the aid of a double convex glass, read a small type.

I am, Sir, your obedient servant,

WILLSON CRYER, M.D.

Bradford, Oct. 8th, 1834.

Das Eisenoxydrat, ein Gegeng ift des Arsenigen Saure.

HYDRO-OXIDE OF IRON AN ANTIDOTE TO ARSENIC ACID.

MM. BUNSEN and BERTHOLD, two physicians at Gottingen, have recently presented to the *Academy of Sciences*, Paris, a short memoir on the properties of the oxide of iron, which merits attention. As yet no real antidote against the poisonous effects of arsenic had been discovered. Thus milk, oil, vinegar, theriaca, &c., which are employed by the common people, are completely useless; nor can any reliance be placed on powdered carbon, as recommended by BERTRAND. The astringent effusions of CHANSAREL, and the sulphuretted alkalies, are not found to possess the specific properties attributed to them. Such is the opinion of the best toxicologists, including MM. ORFILA and CHRISTISON.

Arsenic, however, is a frequent cause of death by poisoning, or in many cases the white powder is mistaken for an inert substance, and gives rise to fatal accidents, by imprudence, want of care, &c. Hence it would be a fortunate circumstance if any means were discovered of neutralizing the activity of this poison. MM. BUNSEN and BERTHOLD attribute the sought-for faculty to the oxide of iron, and we hasten to make public their observations, in order that the toxicologists of Great Britain may repeat their experiments, and determine their actual value.

Arsenic acid has the property of entering into combination with the oxide of iron, and thus forming an insoluble salt (arseniate of iron) which is altogether incapable of causing any injury or derangement in the economy. Chemical researches have shown that in order to neutralize all the arsenic in any solution of arsenious acid, it is enough to add ten or twelve parts of the oxide of iron for each part of the acid.

The best way to prepare the hydro-oxide of iron is to take a pure solution of the sub-sulphate of iron, to increase the dose of oxygen in the sub-salt by heating it with nitric acid, then to pour into the solution an excess of caustic ammonia, and to wash the hydro-oxide of iron obtained, by decantation. Care must be taken not to add the nitric acid before the whole of the sub-sulphate of iron is completely dissolved.

In order to test the efficacy of the antidote, MM. BERTHOLD and BUNSEN have made several experiments on rabbits. It is known that a very small quantity of arsenic is sufficient to destroy those animals; however, the antidote, or oxide of iron, may be given in large quantities, without causing any inconvenience, and this is a most favourable condition for the use of any anti-poison.

In the experiments made by the German physicians, when a sufficient dose of the oxide of iron was administered, the rabbits did not seem to feel the slightest derangement after having taken the poison, but commenced even immediately to eat.

The effect of the antidote depends upon the chemical combination which takes place in the living body between the arsenic acid and the oxide of iron. Hence it results that we should always give a sufficient quantity of the latter to neutralize completely the poison. Thus MM. BUNSEN and BERTHOLD having administered three grains of arsenic in solution to a rabbit, and having at the same time given only enough of the oxide to neutralize a grain and a half, the animal was soon seized with symptoms of poisoning and died.

The authors of the present memoir, after a careful description of the effects produced by arsenic, which kills either immediately, in a few hours, or slowly and after months of suffering, expose the mode of treatment which follows naturally from their discovery. They remark, in the first place, that, as the antidotes hitherto proposed have been unavailing, emetics, recommended by BOERHAAVE, and put in

practice by most physicians since his time, cannot be expected to save any proportion of patients, because one of the properties of arsenic itself is to excite vomiting. However, we must have recourse to this expedient in all cases where the quantity of arsenic swallowed, being great, would require too large a proportion of the antidote, or where the poison has been taken in conjunction with any substances containing tannin, or brown or green tea, or with sulphur, eggs, &c., which have an affinity for the oxide, and would consequently diminish its efficacy.

When the quantity of poison which has been taken is not exactly known, the oxide of iron must be administered in a very high dose, and if the patient vomit immediately after having taken it, the medicine must be continued in diminished doses; but should no vomiting or derangement of the alimentary canal supervene, the administration of the antidote may be proceeded with until the oxide of iron and arsenic acid pass in the form of a salt from the stomach into the intestines. Even then it will be most prudent not to suspend the use of the oxide, but to give it in small doses, or throw it up with a lavement into the rectum.

The authors think the oxide of iron may also be employed in cases where arsenic employed externally has given rise to symptoms of poisoning; but they have not adduced any direct experiments in support of this latter opinion.

THESES FOR MEDICAL DEGREES.—"1990. Did you read a Latin thesis? Yes.—Were you examined by the professor upon the subject of the thesis? The professor was not present.—Who was present? The gentleman beadle.—Did he examine you in physic? He was the only officer of the University present.—Was it not considered a mere ceremony? Yes. — Was the thesis written especially for that occasion? I suppose I ought to state that I did not write the thesis; it was written for me, and produced, and I read it, and the counterpart was read by the beadle.— Would it not have been a waste of time, when merely the beadle was to be present to hear it read, for a gentleman to take the trouble to write a thesis for the occasion? That was my impression, and I did not attempt to write one." — *Dr. Clendining's Evidence before the Parliamentary Committee. Vide* LANCET edition.

NEW INSTRUMENT,

CALLED

THE OSTEOTOME,

DESIGNED FOR THE

PARTIAL ABLATION OF BONES.

Invented, and Exhibited to the Academy of Sciences, Paris,

BY DR. HEINE.

WE have just been favoured by a friend with the proof sheets of a memoir under the above title, which contains a detailed description of Dr. HEINE's new saw, and several cases in which the instrument has been employed. We hasten to analyse its contents.

Previous Instruments for performing the Operation.

M. HEINE commences his memoir by some general considerations on an operation which has hitherto been performed very rarely, and only by the most distinguished surgeons, viz., partial ablation of the bones, and sets himself first to prove the manner in which this depends on the imperfection of the instruments at present in use. This imperfection has given rise to a certain number of remarkable inventions, but no instrument as yet produced has filled up the hiatus in our surgical apparatus; nor do we find one which is applicable to every case, and in an unlimited extent. It is sufficient to mention the various species of hand and chain saws, the trepan, trephine, &c.

The greater part of these instruments do not effect the division of the bone without executing on its surface the sawing motion of the blade, or at least turning in a curvilinear direction, both of which require motion of the whole instrument, and consequently more or less space to work in. Hence their use becomes inadmissible in several parts of the body, through anatomical peculiarities of structure (as in the orbits), where accessory lesions, often more dangerous than the primary malady, are necessarily made to obtain the requisite space.

Without entering into details, we may resume our objections against the instruments at present employed under the following heads, whence it will appear how much one possessing the properties of Dr. HEINE's was called for.

1st. In order to divide a bone, the saw must always describe the sawing motion, by which the surrounding soft parts are considerably shaken and irritated. Thus,

in dividing a hollow bone with the saw, or in amputation of the maxillary bones, the nerves which penetrate their substance are dragged about in all directions, a circumstance that may occasion severe accidents.

2nd. To procure a space necessary for the action of the saw, the soft parts must be removed from the bone, in extent much greater than the portion to be amputated, and this dissection is always carried the further, in proportion to the depth at which the bone is situated.

3rd. In consequence of the alternate motion of most saws, the bone is often divided beyond the point we propose to cut, an objection which holds good even against the rowel saw, an instrument that has many other defects; it is fixed with difficulty on the bone, and its action is uncertain. When the rowel of the saw is small, we can only act superficially on the bones, because the axis soon comes in contact with the divided part, and if to remedy this inconvenience we choose large discs, the latter require a very extensive space to be moved in, whenever the bone is to be cut extensively.

4th. Most fine saws are liable to assume an oblique direction, or to become locked. This often happens to the chain-saw, which may even break.

6th. During the use of all these instruments, the soft parts are not completely protected; yet in many cases it is absolutely necessary to avoid injuring them, as in trepanning, &c.

7th. We are unable to remove certain parts, in cases of disorganization requiring an operation, on account of the imperfection of the present instruments.

8th. Several of those in common use, as the bone-nipper, gouge and mallet, &c., act in too rude and violent a manner, and their use may readily give rise to new lesions of the bone or surrounding parts.

The inconveniences now enumerated are altogether inherent in the form and manner of action of the instruments invented, up to the present time, for the division of hard parts, which, no matter on what type formed, can only make certain rectilinear or circular incisions of a very limited nature; and every surgeon who has had occasion to employ them, must have felt their imperfection.

In order to remedy this state of things, M. Heine has, after several years of the most patient labour and investigation, succeeded in producing an instrument which, from what we have seen of it, promises to supply in the most perfect manner the defects of other saws, and to become a most useful addition to the apparatus of the operating surgeon.

Description of the Osteotome, and Method of employing it.

The osteotome is based upon this principle, viz., that the instrument should act on the hard parts, in the same manner as the scalpel on the soft, and that it should be applicable to all cases and under all circumstances.

With regard to form and action, the osteotome should be compared to a knife, or a very strong bistoury. It resembles a scalpel, with a straight blade and fixed handle. The blade is composed of three principal parts, viz., an inferior part, which the author calls *porte-scie*, a middle part, or *case*, and a superior or *handle*.

The porte-scie forms a blade, terminating inferiorly in a point; one of its edges is convex, the other nearly straight, and it is fixed into the case of the instrument.

The *case* is simply composed of two plates, placed one upon the other, and between which is contained a toothed wheel, put into motion by a handle. Along the wheel and the porte-scie already described, runs a jointed saw of an elliptical form composed of rings, articulated one with another, and forming three ranges of teeth in a line.

This saw, thus composed of a chain united at the two extremities, and which may be taken off at will, is furnished on its anterior edge with a set of teeth, called the "cutting teeth," and on its posterior edge, with a series of blunt teeth, to set it in motion; by means of these latter, the saw is made to move superiorly, that is to say, in the *case*, along a groove, and on a small-toothed wheel, which is furnished in the centre with an axis and handle, and at the circumference with depressions in which the blunt teeth of the saw enter. At the inferior extremity, which is the active part during the operation, the chain glides along the edges and point of a blade, whose direction, however varied, it is capable of following, in consequence of its articulations and flexibility.

To set the saw in action, we have merely to turn the handle of the small wheel; the chain immediately commences to revolve, and, describing the ellipse already noticed, it incises at its cutting surface, while the blade remains fixed. The blade and the chain of the osteotome, although intimately united, are two distinct parts. The cutting part is susceptible of a motion altogether independent of that of the blade, which merely serves as a support to the chain and the apparatus moving it. But, on the other hand, the blade, with its moveable chain, may be turned in all directions in the soft parts, in a right line, or in a curve ac-

cording to the will of the operator, exactly like a knife. To obtain this movement, the upper extremity of the saw is furnished with a handle, and for greater surety and firmness a prop is added on the left side, which may be moved in all directions, and, consequently, applied everywhere. These two movements, altogether independent of each other, viz., that of the chain-saw, and that of the totality of the instrument, permit the greatest possible latitude in its use, and, besides, present advantages which no other saw has. This likewise constitutes an essential difference between the osteotome and the knife. In the latter, the cutting edge cannot move without the whole of the instrument being moved in equal proportion, while in the former, the edge, though firmly joined to the blade, may be put in motion, while the handle remains fixed. Again, the point of a knife can only penetrate by pressure, but the osteotome acts both by pressure and traction, and particularly by the latter. The blade is gently pressed upon the part to be divided, and the point, by its motion, independent of the blade, continues to divide by traction. Hence a cutting edge, fifteen inches long, may be brought to act at the point of the blade by an incision of a few lines in extent, without more space being required than the line which is to be divided.

In order to preserve the surrounding soft parts from all injury, two flat hooks (*couvre-scie*) are attached to the edges of the blade of the osteotome, which glide along two frame-grooves; they almost touch the edges of the saw, and meet at their inferior extremities, below the point which they cover. They may be advanced or retired by means of a spring, concealed in the right side of the handle. When pushed forward, the couvre-scie leave the edges of the saw and the point; when drawn backward, they approach the saw. They may be made to act separately or together.

It is between the two couvre-scie and the saw that the bone is to be seized. On making the spring act, the two parts, viz., the couvre-scie and the saw, are drawn with equal force towards the bone, and if the saw be set in motion, the bone will be divided by the instrument which approaches the couvre-scie. They also serve as a sure guide to the saw during the whole time of its action, and also as an exploratory sound to determine the progress of the operation, besides which they protect perfectly the soft parts.

By its peculiar movement the osteotome avoids all the inconveniences already enumerated, and without having any of the faults of other similar instruments, presents numerous advantages, some of which we shall now proceed to notice.

Advantages of the Osteotome.

1st. The osteotome is capable of executing on the bone, not only all operations hitherto performed with other instruments, but may in all probability be applied to others which have as yet been impracticable with common means. With the osteotome we may separate and excise a portion of bone, of any form and size, or at any depth, by a gentle pressure, without producing any shock, splinters, or injury, to the soft parts. The experiments already made prove what might be, *a priori*, deduced from the structure of the instrument, viz.,

2nd. That as the osteotome does not describe the come-and-go sawing motion common to all ordinary saws, it does not concuss or derange the soft parts or bones, and acts rather by traction than pressure.

3rd. On account of the peculiar motion of the osteotome, the soft parts are much better spared; it is not necessary to expose extensively the surface of the bone which is to be divided; a very small incision of a few lines gives space enough for the saw to act upon at any depth; in short, it is never necessary to expose more of the bone than we propose to amputate.

4th. By using the osteotome, we are not forced to remove a greater quantity of bone than the object of cure requires, as with the trepan, because the former instrument makes right-lined or curved incisions, great or small, and in any direction, according to the pleasure of the operator. Thus, for example, a foreign body (as a ball), a fragment of broken bone, a depression, a fungus, or a fissure of the skull, may be exactly circumscribed by corresponding incisions. This has been illustrated in Germany and France by innumerable experiments on the dry bone.

5th. By means of a simple incision, not more than a line in breadth and a few lines long, the skull may be divided, and the state of the membranes and brain explored with a stilet, in all cases where that may be judged necessary. The wound thus made heals very readily, and promises great advantages in cases of effusion, or lesion of the brain.

6th. The action of the osteotome is not horizontal, like the crown of a trepan, but perpendicular, and hence it enables us to discover and remove any splinters covered by the skin of the skull, when the osteotome is applied near their edges; the trepan, on the contrary, only serves to displace the splinters.

7th. The osteotome divides rapidly one line after another, while with the trepan

the operation is often dangerous, from the variable thickness of the bones of the skull.

8th. The osteotome may be fixed on the portion of bone to be removed. With instruments acting by a sawing motion, it is necessary to endeavour to fix the bone through the soft parts by assistants, &c., but this is generally an imperfect means.

9th. Certain parts, as the femoral articulation, and especially the cotyloid cavity, have as yet remained inaccessible to instruments, on account of the extensive injury to the soft parts which their exposure would require, but by employing the osteotome, these lesions become comparatively insignificant.

The author has frequently excised the cotyloid cavity, either in part or totally, in injected subjects, without any injury having been done to the nerves or important vessels, and this operation has been performed by him with complete success on living animals.

Experiments made on Living Animals with the Osteotome.

On the skulls of animals, generally dogs, the author has excised triangular, elliptical, round, and other portions of every dimension, in order to determine whether the round or the angular wounds are the quicker healed, and he found that the angular ones heal more readily. On the vertebral column he has excised one or several plates, with the spinous process, so as to expose the spinal marrow; in two cases there was a complete cure, without any disturbance of the functions.*

He has excised with his instrument portions of various long bones, as the humerus, femur, tibia, &c., and found that reproduction was more complete, and the restoration of the function of the injured part more rapid, in proportion as the soft parts were less injured.

The author has also excised the articulations of the lower jaw, of the hip-joint, the scapula, elbow, and knee, in order to observe what takes place in the formation of a new joint. The excision of the coxo-femoral articulation, which has not as yet been tried on man, was performed on large dogs with complete success. A kind of new joint was formed, and the functions of the extremity were quite restored.

* It is not improbable that Dr. HEINE's saw may at length enable surgeons to treat, with a prospect of success, fractures with displacement of the vertebræ, an accident which has hitherto been in many cases fatal, merely because we possess no means of removing the displaced bone.

Application of the Osteotome to Man.

The number of cases in which the osteotome has already been applied on the human body, amounts to about fifty. The following brief analysis will show the cases for which the instrument has served, and the results obtained.

Operations on the Head. — Eight trepanations were practised in cases of gun-shot wounds, by Professor DEMMÉ, of Zurich; one for caries at Wurtzburg; and an excision of a portion of the orbit at Jena. The chin has been twice removed with the osteotome at Nuremburg, and once at Wurtzburg. In 1833, WALTHER, of Munich, removed the whole inferior portion of the lower jaw, from one branch to the other, leaving the alveolar arch and teeth. The osteotome was directed by Dr. HEINE himself, and the patient was completely cured by the removal of the hypertrophied bone.

In 1833 and 34, MM. JAEGER and DIETZ each excised a portion of the lower jaw-bone with the greatest facility; and in 1834 Professor JAEGER removed the lower maxillary, from the symphysis of the chin to the ascending branch.

On the Trunk. — JAEGER excised in 1834 a portion of carious sternum one inch long by one-half broad; and the author has removed a carious spinous process.

On the Superior Extremities. — Professors JAEGER and TEXTOR each in 1834 excised the elbow-joint: as also did the surgeon at the chief hospital of Vienna in 1833. Various other portions of the humerus and bones of the fore-arm have also been removed.

On the Lower Extremities. — Portions of necrosed tibia were removed at Berlin and Jena; an exostosis three inches long and one thick at Wurtzburg; various parts of the tibia, &c.; and, finally, the os calcis was excised for caries in a girl 13 years of age, leaving the tuberosity for the insertion of the tendo-achillis.

These cases tend to prove, by the fortunate results which almost universally followed the application of the instrument, not only the general advantage of employing the osteotome, but also its superiority over other instruments.

The following is a brief analysis of the principal cases in which the osteotome has been employed for injuries of the skull, by Professor DEMMÉ:—

CASE 1.—*Gun-Shot Wound on the Occiput.*

At the base of the triangle formed by the extremity of the longitudinal sinus, and the commencement of the transverse, the external table of the skull presented

an irregular hole, surrounded by fissures. The professor decided on excising a triangle, and finding the inner table much depressed, he enlarged the portion to be removed by turning the triangle into a square. In the whole extent of this square the inner table had been separated from the outer, and a fragment was driven into the dura mater; an attempt to elevate the inner table was very difficult, and accompanied by violent pain. By a second application of the instrument the internal table was excised near the edges of the square, an operation which could never have been done with the trepan, and the dura mater was seen covered with blood; in ten minutes the depressed brain began to rise, and in fifteen had regained its natural level.

CASE 2.—*Fracture of the Skull by a Fragment of a Grenade.*

A fragment of a grenade had penetrated into the skull through the right parietal bone; the trepan was applied, but the opening made was found to be too small. The size and form of the foreign body being ascertained by a sound, a similar portion of the skull was removed by the osteotome, and the fragment easily taken out.

CASE 3.—*Fracture, by a Sabre-thrust, at the Union of the Frontal with the Parietal Bones, in the Direction of the Coronal Suture.*

The skull was opened by the point of the sabre to the extent of four inches and a half, with considerable depression of the osseous edges, and so narrow was the fissure as nearly to admit the fine stilet. The application of a trepan was impossible. By the aid of the osteotome an oblong square was excised, four and a half inches long by three and a quarter broad; the splinters were thus removed and the depression with them. The two longitudinal incisions passed over the great falciform sinus without injuring it in the slightest degree.

CASE 4.—*Gun-Shot Fracture of the Left Parietal Bone.*

The left parietal bone had been struck by a musket-ball. The two tables were depressed, and at the centre of the depression was a hole, arising from a portion of the skull having been driven in under the edges of the fracture. A trepan could not embrace the whole of the fractured part; a square bit was cut out with the osteotome, and the object of the operation fully obtained.

CASE 5.—*Gun-Shot Fracture of the Left Temporal Bone.*

A portion of the temporal bone was detached and driven in by a musket-ball. The issue of pus and other symptoms showed the presence of matter within the skull. The wound in the bone was circumscribed by the osteotome, the depressed portion elevated and issue given to the pus; in this case, had the trepan been employed it would have been necessary to use it several times, and removed a much greater portion of the bone.

Remarks.—The above-mentioned operations were performed in the presence of several distinguished surgeons, who all concurred in admiring the simplicity and certainty with which the instrument acts. It cannot fail to strike the reader how superior the osteotome is to other instruments, even in cases of wounds of the head. It perfectly accomplishes the desired object, with the least possible loss of bone, and the dura mater does not seem to run the slightest danger. The point d'appui of the osteotome is placed on the sound part of the bone; with the trepan and trephine the case is different, and the danger of increasing the depression is thereby augmented. Finally, from the rude manner in which the trepan is necessarily used, the sense of tact in the hand is benumbed and lost: with the osteotome the hand preserves all the fineness of its touch, and is thus infinitely better able to judge of the progress it makes.

Amongst the operations recently performed with Dr. HEINE'S saw, in Paris, we may notice the removal of the coracoid process by M. ROUX, in a case where the application of the chain saw was totally impossible, and the excision of the zygomatic arch was performed at *St. Louis*, by M. JOBERT, with astonishing facility.

In addition to these, M. RICORD, of the *Venereal Hospital*, has reported at length two other cases, of which the principal features were as follows.

CASE 6.—*Caries of the Frontal Bone.—Employment of the Osteotome.—Cure.*

Charlotte Bouquier, forty-six years of age, contracted, twenty-five years ago, a blenorrhagic discharge, which was very obstinate, and resisted baths and the use of mercury for six weeks. At the expiration of a year, chancres appeared in the mouth, and gave way to the employment of a medicine which she did not know.

Several years passed over without the appearance of any syphilitic symptom, but about nine or ten months back large red pustules were developed round the lips, on the chin and cheeks, and soon turned into ulcers. She underwent a third antisyphili-

tic treatment; the ulcerations were rapidly cicatrized, but a tumour began to grow under the skin, covering the frontal bone, and by degrees gained the size of an egg, giving rise to great pain, discharge of pus, ulceration, and, finally, exposure of the bone.

At the time of her reception into the Venereal Hospital, on the 16th of last month, the forehead was covered by a large ulcer, nearly four inches square; at the bottom of which the bone was found dry, brownish, and in a state of necrosis. There was no other trace of disease, and the general health was good.

On the 18th, M. RICORD determined to take advantage of M. HEINE'S presence in Paris, and removed the portion of bone sooner than he otherwise would have done.

The patient being placed in a proper position, the edges of the ulcer were drawn aside to permit the instrument to act on the healthy bone: in less than five minutes the whole extent of the bone to be removed was circumscribed by an irregular incision penetrating to the diploe. This part of the operation was very rapid, but the remainder was much longer, during which the circumscribed necrosis was to be removed; for this purpose the instrument was made to trace a numerous series of incisions, parallel and very close to one another, leaving between them prominent ridges, which were attached by cross incisions in various directions, and after the lapse of an hour all the circumscribed portions were removed as far down as the diploe. The bone was now found healthy at the edges, but inferiorly, and at the middle, the necrosis penetrated more profoundly. This portion was, therefore, attacked in the same manner as the former, and at the end of half an hour we succeeded in forming three layers of bone, progressively diminishing in breadth as they became more deep, and the lowest of which conducted to the dura mater, which was exposed to the extent of an inch by half an inch broad. The operation was terminated without pain, or any accident. Next day a little headach, pulse slightly febrile. 20th. Suppuration beginning.

25th. Pus less abundant from edges; granulation beginning only in the bottom of the wound, and on the dura mater. No fever. Same state to 30th.

October 1st. The granulations make some progress in the bottom of the wound, but near the edges the bone looks yellow, and does not seem disposed to granulate. M. HEINE, therefore, again applied the osteotome, and removed all those parts until the tissue began to look red, and bleed under the steel. No accident.

5th. The points lately attacked begin to granulate; near the edges the bone still looks dry; the granulations of the centre increase every day; the ulcerations about the wound are healing, and everything promises a successful termination.

CASE 7.—*Cancer of the Body and Right Branch of the lower Maxillary Bone; Excision with the Osteotome.—Cure.*

This was a case of cancer of the abovementioned parts in a man 49 years of age. The affection extended from the first right large molar tooth to the neck of the condyle. An operation alone could remove the disease, and this was performed by M. RICORD in the presence of MM. DIEFFENBACH, PHILLIPS, WEBER, &c., in the following manner.

A convex incision was made from the anterior part of the external auditory canal, descending to the lower edge of the body of the maxillary bone, and mounting along the right side of the chin near to the angle of the lips. A second incision was let fall from the lower edge of the first one, and was prolonged downwards, to the extent of three inches over a tumour formed by the submaxillary gland. The bone was now exposed, and the osteotome applied immediately behind the second small molar tooth, and the bone divided without injury to the soft parts, or concussion, and with the most astonishing facility. As soon as the bone was divided, it was separated from the soft parts, and the submaxillary tumour dissected away; but on arriving at the base of the coronoid process, which Dr. H. designed to cut through with the osteotome, he found that the disease ascended higher, and that disarticulation would be necessary; for this purpose a bistoury was passed round the coronoid process to divide the attachment of the temporal muscle, and the fragment of bone being depressed, the soft parts were successively divided; the internal lateral ligament was divided by a sharp straight bistoury, held in the right hand, and guided by the pulp of the left index finger; then the external ligament, the capsule, and the bone, were finally disarticulated. Up to this point no important vessel was divided; the facial artery when cut through bled only for a moment, and did not require a ligature; but in turning the blade round the condyle, the anterior part of the internal maxillary artery was intersected, and furnished a jet of blood, issuing with great force from the bottom of the wound. A bit of sponge was immediately placed so as to compress it, and a double ligature was thrown round the vessel, above and below the injured point, with a curved needle. The enlarged gan-

glia were now removed, and the whole wound, after the lapse of a quarter of an hour to see if any vessel bled, was closed with the twisted suture, according to the principles of M. DIEFFENBACH. The cheek and forehead were covered with compresses, wet with cold water, and frequently renewed.

On account of the inevitable division of the seventh nerve there followed retraction of the face, and some paralysis of the eyelid; the latter was remedied by keeping the eyelid depressed with a band of diachylon, which prevented the constant action of light on the conjunctiva; since then the paralysis has gradually disappeared.

The development of inflammation was opposed by antiphlogistic measures; on the third day the needles were withdrawn, and up to this day, the 15th after the operation, the patient has experienced no accident; he walks about, takes liquid aliment, and presents no deformity, if we except a slight flattening of the right cheek.

We shall now simply remark that we have seen this instrument, and that its manner of action and facility of application fully merit the approbation which it has received in France as well as in Germany.

SKETCHES

OF THE

MEDICAL PROFESSION IN IRELAND.

THE SCHOOL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE extraordinary position in which the internal economy and external relations of this body have placed it, induce us to suspend the notice of other topics intended for more immediate consideration, in order to offer a few remarks on this urgent and important subject.

That the Institution has arrived at a crisis in its history is allowed by all, save those who have an interest in withholding such an admission. It is not, however, to be denied even by these, that serious abuses exist; that these abuses have been proved by the testimony of the parties who deny them; that much discontent with its present condition prevails among its members; and that a desire to render it more suited to their wants and the spirit of the age is rapidly spreading among themselves and society in general. Though there may be much controversy and some acerbity mingled with the discussion of these questions, we do not believe that there is, or can be, any real difference of opinion about them; it is, we presume, a difference of interests, not a difference of convictions, which must be producing these unseemly and unnecessary commotions. The cause indeed of all such contentions is neither mysterious nor deep-seated; it must be obvious to every one at all acquainted with the progress of such establishments, and the springs and motives which too often influence the agents by whom they are conducted. We have never met with an instance of an institution, either sacred or profane, which, in the lapse of years, did not contract impurities, and incur at one time or another the displeasure of those for whose benefit it was intended. The discovery of such an institution must, we apprehend, be left to future history; the records of the past contain nothing of the kind. Let us endeavour to explain this apparent anomaly.

Almost all institutions which arise out of the necessities of the public, and are constructed for supplying its wants, work well at first: they are generally adapted to the circumstances of the times in which they originate, and are sufficient for securing the objects of their establishment. The persons by whom they are conducted discharge their duties for the most part well; their constituents are pleased with the results, because they have no higher standard of comparison to refer to in their judgments. So far all goes on well; execution keeps pace with expectation; and the harmony of relation is mutually preserved. By degrees, however, the machinery impairs; the axles on which it revolves become eccentric to the proper sphere of their duties; the subordinate shafts soon partake of the obliquity of the superior moving powers; and the whole is ultimately thrown into error and confusion. In such cases the spectators are seldom idle; the deviations of the machine daily become more obvious; new ones are invented; they begin to examine, to compare, and at length resolve on the reformation of the old or the adoption of the new discoveries.

In all this there is nothing extraordinary; nothing irrational; nothing which ought to excite bad feeling, or to provoke bad passions. It is merely the natural exercise of common sense; the application of the knowledge we derive from experience in ridding ourselves of evils, and substituting something better in their place.

Let us apply these observations to the

case of the Royal College of Surgeons in Ireland; and see how far they will go in explaining the condition of that body. When this Institution was founded, medicine was in a comparatively low state, not only in Ireland, but even in countries on which the dawn of science had broken at a much earlier period. At that time there were already two medical corporations (so, at least, to a certain extent), the University, and the College of Physicians, which, in respect to medical education, had arrived at the utmost limit of inefficiency. That the College of Surgeons was an improvement on these establishments, that it was in itself a wholesale, practical, radical reform in the medical affairs of Dublin, and was considered as such by those who considered themselves aggrieved by the audacity of the innovation, a law of theirs, still in operation, proves beyond the possibility of contradiction. It certainly did some good, though not one half of what it might; for awhile it was suited to the circumstances in which it was placed; but by degrees abuses sprang up; its energies assumed a wrong direction or remained stationary, while all around it was in motion; new modes, not only of governing, but of organizing similar institutions were developed; and even new sciences and new materials of improvement were promulgated, for the elaboration of which it was found that it was totally unsuited. The consequences were such as may be readily anticipated. The persons by whom it was supported, who looked to its character as the source from whence their own was derived, who, in short, confided their reputation, and often too the greater part of their property, to its slippery keeping, have become dissatisfied with its condition, and demand its reformation. In this there is nothing wonderful; it is cause and effect following each other in the most direct and obvious line—the natural working and tendency of reason to legitimate ends.

We have thus attempted to sketch one group in the picture; to represent the position of those who are endeavouring to recover and to devise means of securing in future their own rights. Let us essay to place opposite to them, on the canvass, the individuals who are struggling still harder to keep those rights from them.

The errors and abuses of such establishments as we have described, no matter how numerous or how gross, always benefit a few persons. No matter how these institutions work for the public, they are sure to do well at least for their agents. They are certain of a per centage on the business done without risk and without loss. Their salaries are paid; accommodations are provided for them; they enjoy the whole of the emoluments derivable from the existence of such associations. They in fact trade under the name and auspices of a great firm, fitted up gratuitously for them, with all the necessaries of scientific commerce, without any intention (poor souls!) of awarding a dividend or a bonus to the other partners in the concern at the end of the year. The party thus circumstanced naturally contend for the perpetuity of the system on which they thrive; it would be more than corporate virtue if they did not. The prospect of the advantages which they possess, and the hope of one day or other sharing in the spoil, always enlist in their service a certain number of retainers and expectants, who follow in their wake, as the shark does the ship, to pick up whatever garbage happens to be thrown overboard. Frequency of intercourse, and community of interests, thus unite the head and the tail—make Mr. Cusack and Mr. Campbell the opposite extremes of such a moral monstrosity as we find existing in the Royal College of Surgeons in Stephen's Green.

So much for the physiology and pathology of the growth and disease of parties in institutions of this description. In conformity with the general views which we have hitherto taken of this subject, we should proceed with an inquiry into the whole economy of this body; but we perceive our space will restrict us to a consideration of the school alone. And here we must premise a few reflections: first, that much ignorance prevails as to the necessity and utility of this school, some imagining that it really forms an essential part of the College; and secondly, that its real or supposed imperfections, as a place of professional education, constitute no part of our argument whatever. Assuming, on the contrary, that it were perfect in its kind, we undertake to show, first, that it is unnecessary to the education of the rising generation of medical men in Ireland; secondly, useless to the College in the collective sense of that term; and thirdly, injurious to the interests of the profession at large in these countries

Let us then make a beginning with the first of these propositions, and ask what necessity is there, in point of medical instruction, for this school? Just as much, and no more, as there is for any other school in Dublin. Standing in any other street in the city, with the brush drawn across the king's arms, with the lion and the unicorn expunged from the sign, we should never hear one word more about its superiority, or the necessity of its exi

ence. There it would be, merely a private school; and would be dealt with according to its deserts. At the time, indeed, at which it was opened, this argument of necessity might be fairly put to its adversaries; there were then no private schools in Dublin at all, and the corporate ones were of the worst description; for many years after its establishment there was but one private school of any eminence, the present school of Peter Street; there are now, we believe, not less than six or seven of these recognised schools in the city, from which students could derive a complete elementary medical education. Pupils, indeed, seem to be much more wanted now-a-days than professors; to whatever point of the civic compass the former turn, east, west, north, or south, they are sure to meet with the latter. Let us, therefore, hear no more of the argument of a necessity, which now, at least, has, and for some years back could have had, no existence.

With respect to our second proposition, we ask what advantages do the licentiates and members derive from the College School? In what respects is it really useful to those men? Is that school so constituted at present, are the lectures delivered there of such character, that the licentiates and members can receive any additional information in such a quarter? We believe there is not one of these individuals who would not repel, as a positive insult, an affirmative answer to these questions. But supposing the converse of such an affirmation to be true, how does the School deal with these men? Why, it places those very men by whose property, it is supported, on a perfect level with the youngest tyro in the profession. It has declared, through its fitting organ, Mr. Colles, that if licentiates wish to attend the lectures of the School, they shall pay for admission just like every other student! They can, then, derive no instruction from the School; or if they wish to refresh their memory on elementary points, they are compelled to pay for the indulgence just as if they had never paid before. So much for the information which they receive. Do they, or are they likely to, draw any other advantages from the funds consumed by this school? Do their widows, their orphans, or themselves, when overtaken by old age or overwhelmed by adversity, find a refuge or support in the institution which they themselves have created? We have never heard of any such provision being made for this purpose. So rational a scheme could never have originated with a school intent on its own aggrandizement alone; or have entered into the contemplation of men so blind to their own interests as the licentiates and members of the College have hitherto appeared to be. But then they have pupils, apprentices; do these receive more attention, or do they pay less for instruction, than other students? There is no arrangement existing for any such objects; they sit on the same benches, hear the same discourses, and pay the same fees, as other pupils. What then, we again ask, do the licentiates and members receive from this School? Nothing—just nothing—that we can see or discover.

We may, therefore, proceed to the next proposition, in which we have promised to show that the School was injurious to the medical profession in Ireland, as well as to the members and licentiates of the College itself. The slightest consideration, indeed, of the circumstances of such a school, must show how well calculated it is to injure the latter. In the first place, It makes a monopoly of apprentices as long as that system of education is tolerated. Secondly, It tends by this very means to deprive the rest of the profession of their proper proportion of practice. Thirdly, It is well known to exercise an unjust influence over the appointments in the medical profession in Ireland. Fourthly, It has succeeded in excluding from all county infirmaries, and from many dispensaries, jails, and workhouses, the graduates of every college except its own. Fifthly, It is adapted to injure in the severest manner all those who take up medical education as a profession in private schools; and these are now a numerous body in the profession. It does so in this manner. First, By deriving a false claim to a superiority over other similar establishments, from its supposed connexion with the College. Secondly, By having every accommodation of apparatus and attendance, with suitable offices provided gratuitously, it possesses an advantage over its rivals in these matters, which they, of course, are obliged to purchase at their own expense, and the basis of fair competition is thus destroyed. Thirdly, As most of its teachers are also examiners, it has a strong tendency to induce students to choose it in preference even to schools where they might be more efficiently instructed. This feeling among the candidates for its diploma is well known to exist in Dublin, and has been generally acted on. We need not proceed with further illustrations; every one will be able to follow out the train of reflection to which our space just now allows us to refer in a general way only. In short, the College, by which we mean its members, its licentiates, and students, for even they form an integral part of it, in supporting this School, act

as inconsistently with their own interests as the cutlers, suppose of Dublin, would, were they to take a fine house, pay the rent of it, lay in a stock of rasps, files, bellows, iron, steel, coals, &c.; and, along with this, select a certain number of men out of their own body to manufacture these materials for their own exclusive profit, without any reference whatever to the advantage of the persons by whom this hypothetical Cutler's Hall was established. Were such proposal made in the Guild of Cutlers, it would be looked on, in the present times, as the project of insanity itself; or, if such an institution had sprung up in a less intelligent age, the discovery of its impolicy would be followed by its immediate demolition. There is not a hammer nor a sledge in the city which would not be in immediate requisition to batter down the obnoxious institute, and the heads too, perhaps, of all those who presumed to contend for its stability. And the sons of Vulcan would be right; for it is surely an object of greater importance that the many should have enough than that the few should have too much. Yet this is precisely the error into which the College of Surgeons has fallen, which has created and supports within itself a monopoly to its own ruin—which puts arms and ammunition into the hands of its enemies for their own destruction.

We have hitherto kept our promise of not making the character of this School a part of our argument,—having undertaken to prove that whether it was good or bad in its kind, it was unnecessary to students; useless to those licentiates and members of the College by whom it was supported; and positively injurious to their and the interests of the medical profession in general in Ireland. Our proofs and reasoning have been unavoidably limited by our desire of keeping within the bounds of brevity; but few and such as they are, we will abide the decision of the public before whom they are now placed.

We shall now, however, take another view of this School, and show that in its present state it is totally unsuited to the wants of the body by whom it is sustained. We need scarcely inform those individuals, that for many years in Great Britain and on the Continent, there have been schools, or rather professorships, of the higher branches of medical science, suited to the capacities and acquirements of the more advanced members of the profession. The men who hold these distinguished situations attempt the attainment of objects of a higher order than those which are sought in the communication of mere elementary instruction. They aspire to loftier ends, and assume a wider range of investigation, than it is necessary for teachers in the lower schools to propose to themselves in the discharge of their duties. In short, these men aspire to be medical philosophers. In Dublin there are no such schools, nor does any such class of men as this exist there. The school of surgery can in no one respect be considered a substitute for the establishments which we have just described; even as an elementary school it is defective. There are two professors of surgery for example, but are they qualified for the situations which they hold, supposing them to be the two best surgeons in Dublin? We know these men well; we will only state of them what is known to every medical man of any information in Dublin. Every one, indeed, who has heard their lectures, must have perceived that the first and professed object of these men is to make what they are pleased to call their own practice and observation, in the narrowest sense of these words, the whole substance of their discourses. They are, as they ostentatiously style themselves, matter-of-fact men; the declared opponents of almost every doctrine save their own. They are didactic dogmatists; the genuine descendants of the empirical school, who exact a submission to, and demand a respect for, their opinions, almost beyond what religion requires in matters of faith from its followers. Their eyes are fixed on the past: futurity to them is a perfect vacuum. This is the spirit, the philosophy, the pole-star of their instructions; nay, more, this course with them is not matter of choice; probably it is matter of necessity. We have heard them early and late; we have conversed with them repeatedly on such subjects; and we assert, that of the changes which have taken place, not only in the mode of communicating instruction, but in the materials of instruction itself, they evince no knowledge in their lectures. Of the authors' names, as well as of the writings in which such changes are developed, they seem quite unconscious. It is hot-wash and cold-wash, black-wash and yellow-wash—we might say, indeed, *hog-wash*, to the end of the chapter. Is this the spirit, we ask, which should influence and direct the labours and instructions of the professors even of an elementary school? Is this the light which should be set up for the excitement and guidance of youth on entering the profession? Is this plan of proceeding, in unison with the spirit which pervades the great mass of medical inquiry throughout Europe at the present time,—a time in which your matter-of-

fact man is as fast disappearing before discovery, as the bear or the sloth is vanishing before the tide of civilization; when it is daily demonstrating that the reputed facts of these fact-makers, are as purely poetical, as essentially fictitious, as if they had been delivered from the brains of their authors by the nine muses and Apollo himself?

But supposing this institution to be what it ought to be, as an elementary institute, still it would not be suited to the College of Surgeons in Ireland. The individuals who compose that body, are for the most part young men who have yet leisure for the acquisition of further knowledge, who, emancipated from the trammels of masters and the drudgery of learning things by rote, for an examination, have arrived at a stage of information, maturity of judgment, and freedom of thought, when they can derive the greatest possible advantage and delight from the cultivation of the higher departments of their art. The school which these men require is not a school of dogmas but of liberal discussion; not of paltry prescriptions, but of principles deduced from the accumulated materials of ages; not of pedagogues, but of philosophers with whom they might commune and consult on terms of perfect equality —a school, in short, in which the library, the laboratory, the museum, would be made available to them by the ablest men who could be selected for that purpose. This alone is what they want, and which they are determined on having. And why not? Are they to remain satisfied with a school from which they can learn nothing?—with a laboratory in which not one of them dares perform a single experiment?—a museum which there is no professor capable of lecturing on? Are they to support all this by their property?—to provide gratuitous accommodations for this school, and all to the end that Messrs. Colles, and Wilmot, and Jacob, and Harrison, and so on downwards, may profit by and laugh at their simplicity?

Having thus placed in as plain and intelligible a shape as our space permits us the objections to this school in its present form, we would address ourselves to the College on the immediate adoption of measures to secure its own interests. But to what effect should we do so?—In the first place, we know that all those who mean well towards the College have already resolved on this course. What we have said, indeed, is but an attempt to embody and methodize feelings which we are well aware are those of the medical public on a great public question. In promulgating these statements, we are doing little more than mechanically collecting and concentrating them into a tangible form. Besides, we are convinced that even if this were not the determination of the College the objections which we have put on record will be taken into account in a more powerful assembly, and the advice which we give be ultimately carried into execution.

And here we must reluctantly advert to our re-appearance, and the notice which has been taken of it by friends and by enemies; the former, anxious lest we should transcend the bounds of legitimate discussion; the latter, lest there should be any discussion at all. *These* will find our answer in the preceding pages; and from it learn our determination. To the other party in the College we owe a different explanation. Their zeal, honesty, and independence, are far beyond any praise which we could possibly bestow on them; they have done their duty fearlessly, and disinterestedly, and, as the event will prove, successfully; we will, however, relieve them from all embarrassment on our account. With them we have no other connexion than occasional agreement of opinion on some points, and, we presume, a common wish to improve the state of the medical profession. Further than this we know them not; nor they us. We alone are responsible for the opinions, the statements, and the animadversions, which appear under our signature. They, however, we must just remark, mistake, in some measure, our objects. We never intended to address ourselves exclusively even to the party professing liberality in the College, much less of course to the College collectively. We know the College too well to commit so gross a blunder; no body of the kind ever yet reformed itself or ever will do so. Reform must come from without. In discussing the affairs of a particular institution, as we have done on this occasion, we do so, not as the advocates of conventional opinions, but in reference to the necessity of a general reform of all our medical institutions. We address ourselves to the public, who, after all, are most interested in the proper adjustment of this question. We cannot, therefore, provide a recompense for their approbation out of the violation of what we deem a duty more imperative even than that of gratitude; fritter away the cause of society in compliment to a portion of it; or "give up," in short, "to a party what was meant for mankind." As far as they can proceed with us in this course, we shall be happy with their company. When they choose to stop, why we must only, as we have often done before,

proceed on our journey alone; but we entreat them not to feel the slightest apprehension for the result. We have sailed without a convoy in worse weather and more dangerous times, and shall we now dread the recommission of our bark to the breeze, when the spirit of a higher power presides at the helm, and smiles on the deep?

One word more. We feel that we should be doing an injustice to the liberal and independent members of the College, if we did not distinguish them from those who, with professions of liberality on their lips, are usually found with the majority on a division. We, of course, must decline pointing them out as fit objects for patronage, by a statement of their names. Our advice to these men would be not to lose their time, or to disturb their mental repose, in vain endeavours to maintain a reputation for decency and consistency, while they are as actively employed in attempts to share the spoils of corruption;—not to be looking towards Mount Sinai, while they are sighing after the flesh-pots of Egypt. The man who can digest half a corporation has no need of carminatives from the press to reconcile his conscience with his appetite. By a little more practice and perseverance he will, in due time, be able to swallow a whole one.

ERINENSIS.

Dublin, October 11th, 1834.

THE LANCET.

London, Saturday, Oct. 18, 1834.

Of all the public institutions in this country, there are none which are so defectively, not to say so corruptly, governed, as are our public hospitals and dispensaries.

If the defects were apparent in only a few of the departments of their management, they might pass unheeded at a time like the present, when it is hoped that we are fast approaching the season of their improvement and entire purification. But when we observe that nearly the whole of the regulations of those institutions are imperfect in design, and still more imperfect in execution; when we further reflect that many months must elapse before any legislative reform in those establishments can be accomplished, and that during that time the students must, by the "regulations" of our colleges and halls, continue to resort to the hospitals for instruction, we should be wanting in our duty as journalists, if we were to omit to direct the attention of pupils, at the commencement of another medical session, to abuses which it is in their power to remedy, and to others, the existence of which can never be effectually removed except by the interposition of Parliament.

It appears that the remarks which we have already offered on this subject have given great offence to the medical officers of more than one of our public establishments, and in reply to the objections which we have advanced against the system of management, and our exposition of the injuries which are inflicted by it on medical students, it has been said that the pupils need not attend the hospitals unless they think proper to do so, and that as they know what the "regulations" are before they pay their money, they have no right to complain unless some engagement is broken by the medical officers.

The dishonesty of this attempt to refute our well-founded accusations, is only equalled by its speciousness. To the untutored observer, however, such an answer may appear to be effective, just, and conclusive. But what is the fact? Instead of the students having the privilege of exercising their judgment on the proposition, whether they will or will not pay the entrance fees to one of the seven hospitals of this metropolis, they are compelled by the "*regulations*" of the College of Surgeons to pay for a ticket of hospital attendance, before they can obtain the diploma of that institution, whether in fact they attend at the hospital or not. They are compelled to do so, in fact, even

if it happen that the attendance during the prescribed term has not yielded the value of the paper on which the alleged privilege is recorded. And yet this peremptory system of compulsion is declared to be one which affords to students the opportunity of "selection!"

The evils which arise out of the operation of such a nefarious system, not only spread over an immense portion of the country, but, in relation to the time and interests of the medical practitioner, affect him, prejudicially, from the moment he enters to the hour that he retires from the profession. Unfortunately, too, it necessarily happens that the members of the community do not escape from those inflictions which generally result from the enactment of corrupt or ill-digested laws. As the Council of the College of Surgeons have decreed that no student shall be examined for the diploma unless he produce a document testifying to his having attended, during a given period, the surgical practice of one of the London Hospitals, such an injunction necessarily deters him from cultivating those advantages which he might derive by an entrance, at an early period of his professional career, to some one of the country infirmaries. It operates injuriously on him, also, by inducing him to believe that whatever instruction he may derive from the gentleman to whom he is articled, is regarded *as nought* by the "great" functionaries before whom he is destined to appear on the day of his examination.

And who will have the temerity to allege that the time thus sacrificed can ever be restored to the individual or to society? If the Council of the College of Surgeons were content to let the hospitals of London rely entirely on the merits of their management for the fees, attendance, and support of the students, no one would have a right to complain; but to make the payment of fees for the attendance of pupils compulsory at institutions over which the College *cannot*, by its charter or by any Act of Parliament, *exercise the slightest legal control*, is a species of fraud of which the Council of that institution would scarcely be guilty if the members of the Council did not themselves derive by far the largest portion of advantage by the continuance of its perpetration. Thus, it has happened, that the pupils have been compelled to make heavy payments to the coffers of those medical officers of our hospitals, who, relying on the peremptory obligation of the by-law of the College, have dared to disregard every portion of their duty, and have attended to no act of the ceremony of inscription but the profitable one of extortion. The "ONE-O'CLOCK" device at *St. George's Hospital*, is an example of the schemes which some men can concoct in order to relieve themselves from the execution of a duty which is enjoined by conscience as well as by the laws of bargain and sale. The arrangements are of such a character that it is rendered *impossible* for the student to derive any advantage from the pecuniary payment which he has made. It is *impossible* for him to observe the hospital practice of the physicians and surgeons. Yet at the end of the session, or at the termination of the period during which he has been defrauded, he is furnished with "certificates" from all the medical officers, testifying that he has, at all times, regularly and diligently attended to their practice—their lectures—and the numerous demonstrations made in the dead-house.

When presented at the College of Surgeons, such "certificates" are instantly received by the Court, because the hospital is one of the "recognised" institutions; that is, it is one of those establishments which happens to be officered by some of the members of the Council, their relatives, their friends, or their dependants. Of the three surgeons, for example, who

sign the certificates at *St. George's Hospital*, two of them, Mr. KEATE and Sir B. BRODIE, are members of the Council; while of the four surgeons of the *Westminster Hospital*, three are members of the Council; and at *St. Bartholomew's Hospital* the whole of the surgeons belong to the Council. And thus it is, the power being placed in improper hands, that that system of extortion, intrigue, and neglect, has been pursued, of which English medical students have so long been the subjects, and the members of the English community have so long been the victims.

Is it in the power of the Council of the College of Surgeons to compel the governors of any of the hospitals to admit medical students at all within their walls? Can the College legally exercise and enforce any edict in reference to the management of any one of the hospitals? Obviously not; because the hospitals are, all of them, independent institutions, such of them as are chartered not having the remotest connexion with the College, and those which are unchartered being maintained by the life and annual subscriptions of governors, whose only law in the conduct of the institutions they support is supplied by the exercise of their own will. The country hospitals, although more remotely situated from the College in point of distance, are not more decidedly unconnected with that institution in point of law, than those of the metropolis. In a word, the mandatory authority of the institution in Lincoln's-inn-fields cannot be made to reach the most insignificant medical charitable institution in London or any one of the counties. But by a well-understood arrangement, the hospital surgeons of London, acting together for their own benefit in the body of the Council, frame laws which are designed to be productive of advantage to no persons but themselves,—frame laws to coerce students into an attendance on the practice of those identical institutions of which they themselves are the officers, and both custom and the law appear to sanction this flagrant wrong-doing. An efficient remedy for evils of such a magnitude it is utterly impossible to provide, unless through the all-powerful hands of the legislature. If the medical officers of our hospitals were elected by competent tribunals,—by parties who are fully capable of exercising a sound judgment on the claims of the candidates, the Council might be excused for displaying some show of favour with regard to individuals thus avowedly gifted; but when it is remembered that nine-tenths of our officers are elected by men who are incapable of testing medical attainments, or who, when those attainments are discovered, are equally incapable of appreciating their amount and value, what is to be thought of the conduct of that medical or surgical College which allows its scholastic discipline to be controlled by the votes and predilections of uneducated non-professional individuals? We must not allow ourselves to be deceived because the chosen party is placed in a large hospital, the question being simply this,—Are the voters themselves qualified to decide on the merits of the candidate? It would be a waste of time to enter into an argument on such an inquiry.

Be it remembered, therefore, that the question of medical reform is now before the legislature, and, as a part of it, the mode of electing the officers of our public medical institutions. On this question medical students cannot exercise any other influence than is to be produced by uniting at the proper season in a demand for some specific plan of amendment. But over those obnoxious arrangements which now interfere with their studies; thwart them in their desire to gratify the expectations of their relatives and friends; and establish on a secure basis the pillar of their future success; they can and may

exercise a control, which, if properly directed, would be productive of incalculable advantages. As it is of the utmost consequence that a kindly feeling should always be maintained between the teacher and the pupil, every manifestation of a hostile feeling should be scrupulously avoided. Nevertheless, it is a duty which the pupil owes to himself, to his parents, and to society, to endeavour to obtain, in return for his entrance fees, all that is promised in the gaudy columns of the prospectuses. It cannot be expected that one or two pupils should render themselves disagreeably prominent by demanding the enforcement of these bonds. But hence it is the duty of the students of every hospital, when they find that they have been made the subjects of treachery or neglect, to make their representations of complaint to the medical officers, in a body. To urge their complaints, in the first instance, in private, but, ultimately, in case of failure, to appeal for address through the instrumentality of the press,—thus bringing the medical officers, for their misconduct, before that dread tribunal whose adverse decision they well know would prove a source of irretrievable ruin.

Let us enumerate a few of those arrangements which are essential for rendering the hospital really of *use* to the students:—

The cases should be systematically recorded in a case-book, which ought to be constantly open for inspection in the wards.

The prescriptions should be so written that the students may understand them, and not display the mere twists, turns, and angles, which characterize eastern hieroglyphics.

In the progress of all interesting cases, remarks should be offered by the medical officers explanatory of the objects for which the medicines are prescribed, and the doses increased or decreased, stating, at the same time, the particular influence which any given medicine has been supposed to exercise on the malady, and the mode, as far as it is known, in which it acts.

When any of the diseases terminate fatally, examinations of the bodies should take place in the dead-house, or some more convenient situation, at which time the histories of the cases should be read, and thus, by connecting the symptoms and treatment during life, with the morbid changes discovered on dissection, the whole case would make an impression on the mind of the hearers, which the events of an ordinary life could not well efface; and the student, thus deriving his information from sources which cannot deceive, would have experience for his guide on the very first day that he undertook to discharge the duties of a legally-qualified practitioner.

In addition to the advantages to be thus derived by those students who choose to exert themselves, the pupils may not only secure a regularity of attendance on the part of the medical officers, but, by repeated petitions and remonstrances, they may get rid of the odious practice of selling the dressers' boxes to the highest bidders, and, by soliciting, with appropriate fortitude, for the appointment of a clinical clerk for every twenty or thirty beds, *they may conduce to the creation of offices which would prove of prodigious benefit to themselves, or to their successors for ages to come. These* things are under their own control; the power over them is in their own hands. If they exercise it with judiciousness and moderation, no appeal which may be made by the students, in so good a cause, for the support of this Journal, will ever be made in vain.

Since the foregoing article was written, we have received two lengthy communications immediately bearing on the sub-

ject above discussed. One refers more particularly to the system of government adopted in *Guy's* and *St. Thomas's Hospitals*, and the other to the establishment of new medical schools at the "Charing Cross" and *St. George's Hospitals*, and the election of medical officers in the *London University Hospital*.

We entirely dissent from the opinion of "ARGUS," that the institution of medical schools should be restricted by law, because experience of past monopolies has taught us that such a measure would be equally injurious to medical students and the community. All that is required amounts to this,—That the students should not be compelled by the halls and colleges to produce "certificates" of attendance at schools and hospitals situated in particular places,—in short, that medical education should be FREE, and remain untrammelled by the pressing and clogging obligations of statutory enactments. Sir B. BRODIE, Dr. SEYMOUR, and Co., have an undoubted right to open a school in the neighbourhood of *St. George's Hospital*. At the same time, the motives which induce them to oppose a portion of their colleagues in that institution may be anything but praiseworthy. Still, this is not a point for examination or discussion. We are not to deal with motives, but with the public acts of the parties; and if there be no circumstance connected with the opening of the proposed establishment, which trenches upon the legal rights of individuals, or tends to operate prejudicially on the community, neither the profession nor the public have any just ground for complaining. On the contrary, as the experience of many years has led us to a knowledge of the fact, that it is impossible to communicate to medical pupils collected into *large classes*, a practical acquaintance with the science of medicine, it affords us pleasure when we hear that the number of medical teachers is increased, and we hope that the time is not far distant, when the law will concede to every physician and surgeon in the empire, the privilege of educating his pupils, and qualifying them, without the aid of "certificates" from "recognised" schools or "recognised" hospitals, for an examination before the scrutators of A NATIONAL FACULTY OF MEDICINE. A privilege of this kind once conceded, would stimulate gentlemen engaged in private practice to cultivate the field of medical science to the latest period of their professional labours.

And why should not the premiums paid for communicating a knowledge of medicine, flow, in part, into the pockets of private practitioners, as well as into those of the physicians and surgeons of the great hospitals? In the latter case, however, it is absurd to say that the fees are paid for "instruction." We repeat that the science of medicine cannot be taught to hundreds of individuals at one and the same time. The hospital and lecture-room ticket-system is, therefore, from beginning to end, a mockery, a farce, a robbery.

IN ancient times the inquests held by coroners were respected as solemn institutions, but in the present day, when a non-medical coroner takes his seat in the court, the medical public, at least, expect to witness a scene of folly or of mirth, or, possibly, of both.

Our attention has been directed to the reports of two or three inquests held within the last week at the *London Hospital*, and it would appear, from what we have read, that the medical officers of that institution, as of other similar establishments in the metropolis, never think it a part of their duty to attend at the inquests, although that alone can enable the jury to return a consistent verdict. In-

stead of the officers of the hospital, some of the medical students are made to attend, when, from their youth, and their want of official connexion with the establishment, frequently excite the displeasure both of coroner and jury, and very possibly are insulted, for endeavouring to discharge a duty which ought to be executed by others. In one of the cases at the *London Hospital*, the pupils as well as the medical officers were absent. "At length," says the report in the *Times*, "after the jury and coroner had been de-"tained an hour, the *beadle* of the institu-"tion was sworn, and stated that the de-"ceased died on Sunday morning of ery-"sipelas. '*He was well treated*,' said the "beadle, 'and was allowed wine and "nourishing diet.' Whereupon the jury "returned a verdict of 'accidental death.'"

The evidence of the *beadle* settled the verdict. The *beadle* knew that the patient died on Sunday morning, and the *beadle* knew that the patient died of erysipelas. But the beadle knew *more*. He was enabled to state "that the patient was *well* "*treated*, and allowed wine and a nourish-"ing diet." What could be better treatment in the opinion of a ruby-faced beadle than *wine and a nourishing diet?* It is not improbable that he longed for the broken leg and the erysipelas too, that he also might be allowed *wine and a nourishing diet*. The coroner and jury, as in duty bound, relied on the scientific medical testimony of Mr. BEADLE, and returned a verdict accordingly,—a verdict which possibly was indebted for its existence to the "wine and nourishing diet."

We are not disposed to say anything in an unfriendly spirit to our old opponent, Mr. BAKER, but we must remind him that in thus allowing the medical officers of the hospital to shift their responsible duties on to the shoulders of the beadle, he is not turning to advantage the lectures which he once heard during ten successive days, in front of the Session-House on Clerkenwell Green.

PARISIAN SOCIETY OF FOREIGN PHYSICIANS.

A SOCIETY has just been established in Paris, under the above name, composed of the English, German, and Italian medical men residing permanently or temporarily in that capital. The object of the association is to afford a medium of communication between practitioners who are foreigners in France, not only upon scientific subjects, but upon many minor matters, in which the want of an opportunity of intercourse prevents medical strangers from deriving the benefits which are obtainable by means of a point of centralization during their sojourn in Paris. Amongst others who have taken an active part in the formation of the Society, is M. RICORD, of the *Hopital des Veneriens*, and there seems much probability that it will soon be in the state of active operation to which its usefulness tends to press it. Sir A. COOPER, who is at present in Paris, or, rather, who was there at the date of our last communication, October 14th,—and whose arrival, by-the-by, was announced in the same paragraph of the French newspapers which notified that of Mr. CHARLES KEMBLE, "the celebrated actor" (in another theatre),—was invited to preside at the first meeting of the founders of the Society, held on Saturday last, the 11th, but the Baronet was too much occupied by the aristocrats of "the other side of the water" to bestow the required portion of time on his humble confreres in the quartier St. Jacques.

BARTHOLOMEW'S HOSPITAL.

LIGATURE OF THE BRACHIAL ARTERY FOR ANEURYSM AFTER VENESECTION.

THE subject of this disease was brought into the operating theatre a little before one p.m., on Saturday last, when Mr. LLOYD, assisted by Mr. LAWRENCE, and surrounded by the other hospital surgeons, commenced the operation of tying the brachial artery, at about the junction of the inferior third with the upper two-thirds of the arm. On making the dissection necessary to expose the vessel, the profunda inferior, or ramus anastomoticus was, we believe, cut through. After se-

curing with ligatures the bleeding mouth of this branch, the operator proceeded in his search after the main trunk. This occupied some time, though many of the surgeons in attendance appeared anxious to proffer their assistance and advice. After the lapse of *half an hour* the artery was seized, and tied. When the wound had been dressed, forty-two minutes having now elapsed, and the patient removed, Mr. LLOYD thus addressed the pupils:—

"The subject, Gentlemen, of this disease is a woman who has been for some time in a very bad state of health; a few weeks from the present time she was bled, when the artery was wounded in the operation. After the cicatrization of the integumental wound, a free communication between the vein and artery was discernible, but by pressure and the application of cold, the passage between these vessels was obliterated. After this, however, a diffused aneurysmal tumour remained, which became circumscribed by the continuance of the means just mentioned. Under these circumstances I obtained the consent of the patient to operate. You must all have observed, Gentlemen, the delay attending the performance of this operation, which in tying the brachial artery often occurs from the want of pulsation in the vessel when exposed; in fact, I remember more than one case of similar difficulty occurring when securing the humeral as well as the femoral artery in this very theatre; but I cannot help stating to you my conviction, that had I performed this operation in private, I should have accomplished it in much less time, for the space around the operator was so crowded with persons, many of whom continually proffered their advice, that long after I had satisfied myself of the identity of the artery, I was prevented from tying it by the difference of opinion which prevailed amongst those by whom I was surrounded. I wish it to be understood, however, that in alluding to the crowded state of the theatre, I do not in any way refer to you, Gentlemen (the pupils), as I feel assured I could, whilst attending to an operation, easily forget your presence; but the continued objections of the bystanders must necessarily confuse one, and very much retard the progress of the operation."

Many persons expressed as much surprise as Mr. LLOYD on observing the interference of several surgeons who surrounded the operator. In fact, one gentleman actually took the knife and forceps from Mr. LLOYD's hand, and proceeded coolly to satisfy his doubts by actual dissection. This seemed to be perfectly unwarrantable, however bunglingly he may have thought Mr. LLOYD was operating.

So one surgeon is awake at last to the impropriety of crowding the operations at this hospital! It is unnecessary here to speak of the enormous sums of money obtained from pupils, who are desirous of witnessing the surgical practice of the hospital; but it is never untimely to expose the conduct of those amongst its officers who directly violate the conditions on which they are so liberally paid, by countenancing the infringement of a very proper regulation for affording to the numerous pupils of the school an opportunity of witnessing the operations. There is a notice constantly hanging in a conspicuous part of the theatre, stating that the area is appropriated solely to the surgeons and the dressers of the operator. Yet, in spite of this, the encroachments in that place are such, that we counted *thirty* persons around Mr. LLOYD on Saturday. How great is the annoyance both to the plundered students and the patient (who herself complained greatly of the heat of the surrounding atmosphere—an atmosphere of *respired* air) may be easily guessed. The only way to prevent a repetition of this nuisance, if the officers will not correct it, will be to mention publicly the names of those gentlemen who are so devoid of all feelings of delicacy as to intrude themselves where they have so little right.

The President and Senate of Yale College, Connecticut, U.S., a college which holds the highest rank amongst the scientific institutions of America, conferred the honorary degree of LL.D. on Mr. GIDEON MANTELL, the celebrated surgeon and zoologist of Sussex, at their annual commemoration, held on the 20th of August last, as a tribute of respect for his scientific researches.

ERRATUM.—In the letter page 104 of last LANCET, line 8, col. 2, the word HOWSHIP was a misprint for SHIPTON. No professional gentleman of the former name is known in the medical circles of ———." (The next word is illegible.)—*Note from Sir F. F.*

In leader last week, page 101, line 11, *for* aching site *read* aching sight.

In the editorial remarks attached to the letter of Mr. Elwin, No. 579, page 78, line 6, *for* The *studious* pupil is the last person to complain of the individual who ought to be his instructor, *read*, The *idle* pupil is the last person to complain, &c.

Mr. J. Heath.—As it is quite clear that the patient's health has improved under the treatment, it does not appear, considering his condition, that his chance of recovery would be accelerated by removal from the hospital.